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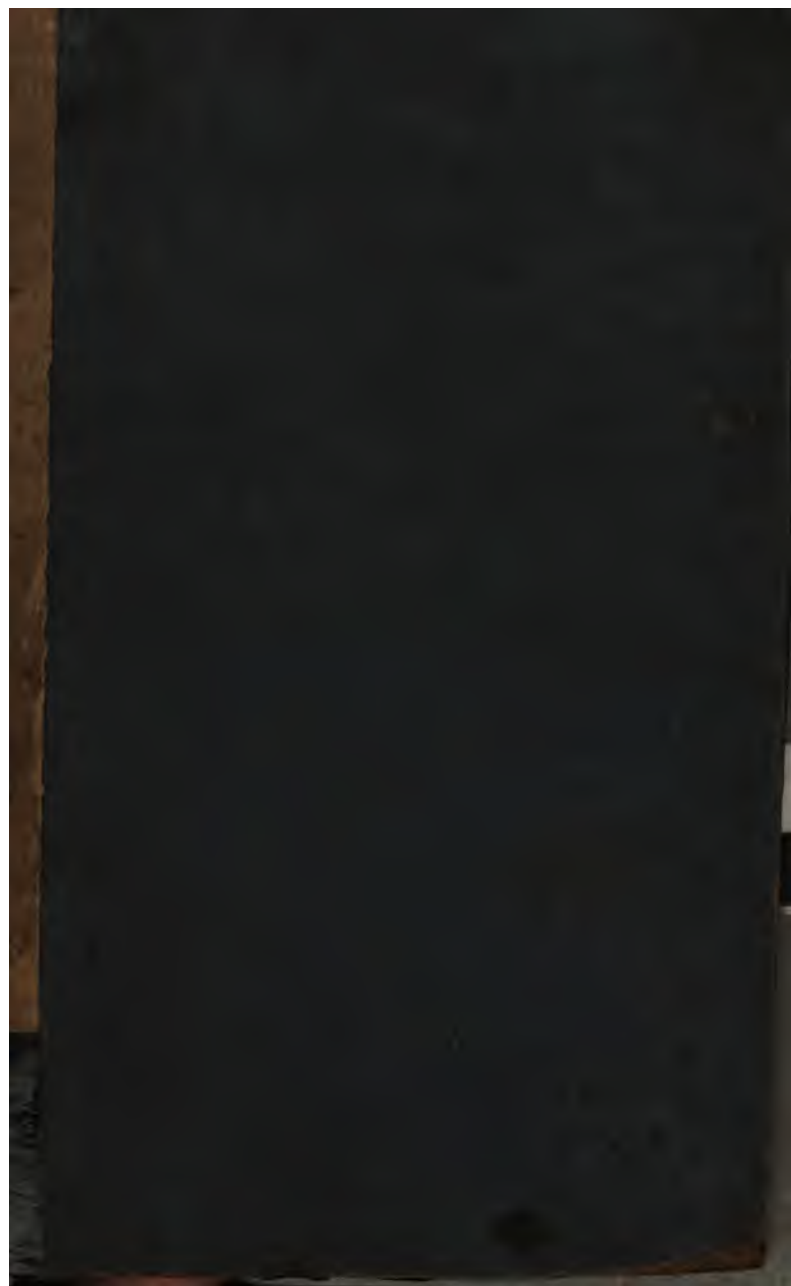
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AN
A T T E M P T
TO ILLUSTRATE THE
U S E F U L N E S S
O F
DECIMAL ARITHMETIC.





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DECIMAL ARITHMETIC,

IN THE

Rev^d. Mr. *Brown's* METHOD

Of WORKING

INTERMINATE FRACTIONS.

By WILLIAM RIVET, Esq.

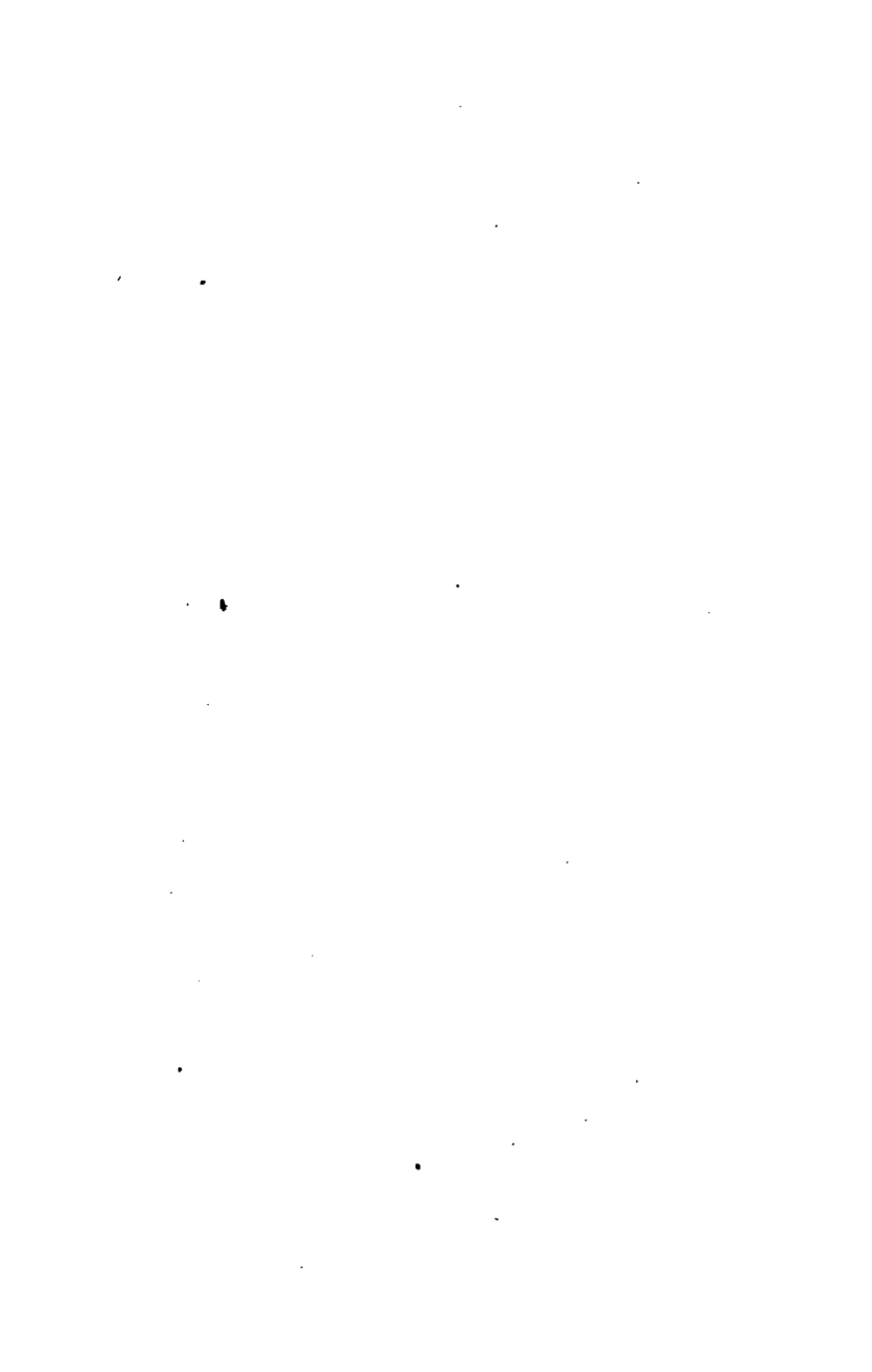
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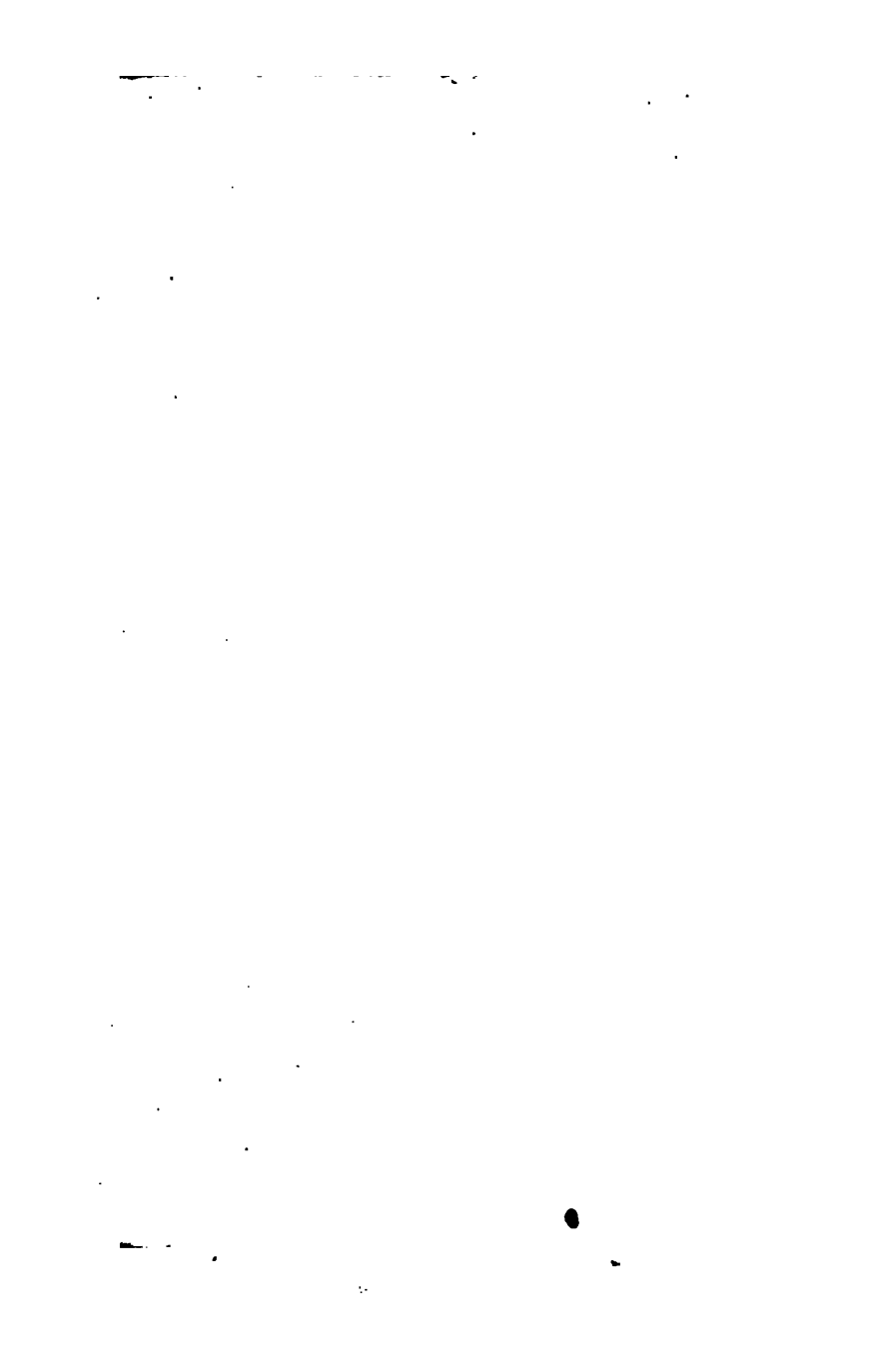
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A N
A T T E M P T
TO ILLUSTRATE THE
U S E F U L N E S S
O F
DECIMAL ARITHMETIC.

 HE most considerable Improvements in Decimal Arithmetic, that have been made since the Days of Mr. COCKER and Mr. WINGATE, (two of the best Authors in the last Century) consist in the Manner of working Interminate Fractions; and of reducing our Coin to Decimal Numbers, and valuing those Numbers at Sight.

A

And

And it may be doubted, if any Thing new has been produced, that was not exhibited before the Revolution, by the Ingenious and Reverend Mr. BROWN, (who invented the *Rotula*) at least with equal Perspicuity ?

I had the Honour to be one of his intimate Acquaintance, and learned more by a few Hours Conversation with him, than I could have attained by Years of Study; and shall not now presume to offer any Thing of my own, but will only communicate what I collected from his Instructions.

To begin with the Reduction of Money. All the Difficulties therein are owing to the Subdivisions of a Pound Sterling : For if the Integer contained exactly 1000 Parts as a Mill Ree (or Quarter of a *Moi d'Or*) in *Portugal* doth, our Arithmetic would be all in round Numbers.

But

But having only 960 real Parts in a Pound, we are obliged to supply the Deficiency by the Addition of 40, and then suppose the Pound to consist of 1000 Farthings; whereof every 50 is accounted one Shilling, 25 are reckoned six Pence, and all under 24 are so many real Farthings.

By these Proportions we can at Sight reduce any decimal Number to Money; all Figures on the left Hand of the Pointer being Pounds, and of those to the right Hand, only the first three Figures (or the thousandth Parts) are the Fractions of a Pound.

Hence also we are instructed how to express Money in decimal Fractions; for we must set down fifty thousandth Parts for every Shilling, and for any Thing less than a Shilling as many Thousandths as

A 2

there

there be real Farthings, adding one if they amount to or exceed twenty-four.

But such Numbers only as are aliquot Parts of 100, will terminate rightly; for unless the two last Figures of the thousandth Parts are Cyphers, or 25, or 50, or 75, they will be imperfect, and require more Places in the Decimal. To supply which Defect, multiply the Difference or Excess of the Thousandths by .04 (which is the decimal Fraction of $\frac{1}{25}$ th) adding 1 to every 24 in the Product, and you gain the two subsequent Figures in the Place of hundred thousandths. And if the fourth and fifth Figures be imperfect, proceed in the same Manner to gain two more Places in the Decimal, which will then be exact, or end in a simple Interminate, which is tantamount.

These

These Rules will be more evident by the following

EXAMPLES.

Let 2*s.* 18*d.* and 1*s.* be expressed in Decimal Numbers.

For the 2*s.* we set down $\frac{200}{1000}$ Parts, (which is $\frac{20}{1000}$ for each Shilling) expressed thus - - - - - .100

For the 18*d.* $\frac{18}{1000}$ and $\frac{25}{1000}$ thus .075

For the 1*s.* only $\frac{10}{1000}$ thus - .050

And 6*d.* being the Half of 1*s.* is .025

These four Numbers are perfect in the Place of Thousandths, an Unit being added in each Decimal, for every 24 Farthings in the Sum expressed.

Now, if 6*d.* or 24 Farthings, require the Addition of an Unit, the Decimal of every single Farthing must have the $\frac{1}{24}$ th

A 3 Part

Part of that Unit added thereto to make it complete.

Thus for one Farthing we set down .001 thousandth, but the Decimal is imperfect, for it is not a full 24th Part of the true Decimal of six Pence, but wants the Addition of $\frac{1}{24}$ th of 1, which is .0416, and if this Number be subjoined thus .0010416, it will perfect the Decimal of a Farthing.

For Proof of which, divide the Decimal of 6d. by 24, and the Quotient will be .0010416.

Here observe the Reason of substituting .04 instead of .0416, as a Coefficient for perfecting the Decimals. A Twenty-fifth being less than a Twenty-fourth only by 1 in 24; and the lesser Number being more easy to work by in the Head; for if you multiply by .04, and add 1 to every

24 in the Product, it will be the same as if you had multiplied by .0416.

Some Fractions of Money will be perfect at the fourth or fifth Place in the Decimal, as the following,

$$4d. \frac{1}{2} \quad 3d. \quad \text{and} \quad 1d. \frac{3}{4}$$

Four Pence Halfpenny contain 18 Farthings, for which set down $\frac{18}{10000}$ thus .018, to perfect which Number multiply the 18 by .04, and the Product is 72, wherein are contained three 24s. so that 3 added to the 72 compleats the Decimal, thus .01875.

For three Pence set down .012, then multiply the 12 by .04, which produces 48, and add 2 for the two 24s. therein, and the Decimal is perfect, viz. .01250.

One Penny Halfpenny is .006, and .04 times 6 make 24, to which add 1, and the Decimal is .00625.

For

For Proof of the last two Numbers, divide the Decimal of six Pence by 2, and the Quotient by 2, thus

$$2) .025$$

$$2) .0125 \quad \text{the Decimal of } 3d.$$

.00625 ditto of three Halfpence.

Other Numbers require six or seven Places in the Decimal, as

$$11d. \frac{1}{4} \quad 6d. \frac{3}{4} \quad \text{and} \quad 5d. \frac{1}{4}$$

For eleven Pence Farthing set down .046, which is one more than the real Number of Farthings; and as 46 exceeds 25 (which is a perfect Number) by 21, multiply 21 by .04, it will produce 84, to which add 3, and the hundred thousandths will be 87. But this is imperfect by an Excess of 12 above 75, wherefore multiply 12 by .04, adding 1 to each 24 in the Product, and the two last Figures will

will be 50, so the perfect Decimal of $11d. \frac{1}{4}$ is .0468750.

Six Pence three Farthings are .028 thousandths, which exceed 25 by 3, and .04 times 3 make 12, and .04 times 12, adding as before directed, make 50, which compleats the Number thus .0281250.

Five Pence one Farthing is .021, and .04 times 21 produce 84, and 3 added make 87, which being 12 above 75, that Excess of 12 multiplied by .04 produces 50, as in the last Example, and the Decimal will be .0218750.

All the foregoing Examples are of perfect Numbers that terminate in 5 or in a Cypher; but there are other Fractions of Money that will be interminate, as

$\frac{1}{3}d$, $\frac{1}{6}th$, $\frac{1}{12}th$, and $\frac{1}{24}th$ Part of 6d.

A Third of 6d. is 2d. which in the Thousandths is expressed thus .008. Now
.04

.04 times 8 is 32, and 1 added makes 33 in the fourth and fifth Places ; but 33 exceeds 25 by 8, and the same Excess multiplied by .04 will produce 33 again, so the Fraction will be interminate, having a continued Series of Threes, which is tantamount to a perfect Number, its Deficiency being only 1 in 10.

A Penny, or $\frac{1}{8}$ th Part of 6*d.* is expressed thus .004, and .04 times 4 make 16 for the hundred thousandths, and .04 times 16 will produce 64, and 2 added will be 66, to go in the sixth and seventh Places of the Decimal ; but 66 exceeds 50 by 16, and that multiplied again by .04, will give the same Product continually, wherefore the Decimal is interminate, to wit .0041666.

An Halfpenny, or $\frac{1}{12}$ th Part of 6*d.* is in the Thousandths .002, multiply 2 by .04, it produces .08, and .04 times 8 is

32,

32, and 1 being added, (because above 24) make 33 for the two last places, and need no lower reduction, so the Decimal is .0020833.

A Farthing, or $\frac{1}{4}$ th Part of 6*d.* is .001 in the Thousandths, .04 times 1 is .04 in the Place of hundred thousandths, and .04 times 4 are 16, which is interminate, and the Decimal stands thus .0010416.

These few Examples shew all the Variety that can happen in the Reduction of English Money to decimal Fractions, and hereby we obtain a sure Rule to know when any given Decimal is adequate to the Sum expressed by the thousandth Parts; for if .04 times the Excess of the Thousandths is the same with the two subsequent Figures, and .04 times the Excess of those, the same with the sixth and seventh Figures, the Decimal is perfect.

Note,

Note, the continuing the Decimals of Money lower than thousandth Parts, is never necessary but when some farther operation is to be performed therewith, as multiplying, dividing, adding, or subtracting them.

The Manner of working such decimal Fractions as are interminate, comes next to be considered.

And here it may be of Use to shew, how vulgar Fractions are converted into Decimals, and how to reduce them back into vulgar.

To reduce a vulgar Fraction to a Decimal one of equal Value, set down the Denominator for a Divisor, and the Numerator for a Dividend, adding thereto as many Cyphers as you want Places in the Quotient; fix a Pointer between the Numerator and the Cyphers, and work as in a common Division of whole Numbers.

EXAM-

EXAMPLES.

Let $\frac{1}{4}$, $\frac{1}{8}$, and $\frac{1}{16}$ be reduced.

$$\begin{array}{r} 4) \overline{1.00} \\ .25 \end{array} \quad \begin{array}{r} 8) \overline{1.000} \\ .125 \end{array} \quad \begin{array}{r} 25) \overline{1.00}^{\times} (.04 \\ \underline{100} \end{array}$$

These Quotients (if continued) would terminate in Cyphers, and are therefore perfect Numbers.

Let $\frac{1}{6}$, $\frac{1}{12}$, and $\frac{1}{24}$ be reduced.

$$\begin{array}{r} 6) \overline{1.000} \\ .16\bar{6} \end{array} \quad \begin{array}{r} 12) \overline{1.0000} \\ .083\bar{3} \end{array}$$

$$\begin{array}{r} 24) \overline{1.0000}^{\times} (.041\bar{6} \\ \underline{96} \\ 40 \\ \underline{24} \\ 160 \\ \underline{144} \\ 16 \end{array}$$

The

The three last Quotients would continually repeat the same Figure, and are therefore called simple Interminates. But there are other Fractions, which in the Reduction of them to Decimals, do not repeat a single Figure only, like the foregoing, but after producing a few Figures in the Quotient, the Remainder will be the same Number you began with, and then of Course you will have a Repetition of the same Figures over again, and these are called compound Interminates.

Of which Sort are $\frac{1}{7}$, $\frac{1}{13}$, and $\frac{1}{73}$.

$$\begin{array}{r} 7) 1.000000000000 \\ \hline .142857142857+1 \end{array}$$

$$13) 1.00 \overset{x}{(.076923 + 1}$$

$$\underline{91}$$

$$90$$

$$\underline{78}$$

$$120$$

$$\underline{117}$$

$$30$$

$$\underline{26}$$

$$40$$

$$\underline{39}$$

$$1$$

$$73) 1.00 \overset{x}{(.01369863 + 1}$$

$$\underline{73}$$

$$270$$

$$\underline{219}$$

$$510$$

$$\underline{438}$$

$$720$$

$$\underline{657}$$

$$630$$

$$\underline{584}$$

$$460$$

$$\underline{438}$$

$$220$$

$$\underline{219}$$

$$1$$

When

When these compound Fractions consist of an even Number of Figures in the Decimal or Circle they form, they most commonly have this Property, that one Half of the Circle added to the other Half, will always produce a Series of Nines; wherefore the Denominators of compound Interminates, are different from those of perfect Decimals, and of simple Interminates.

For Instance, the Decimal of $\frac{1}{7}$ contains a Circle of six Figures, to wit, .142857 &c.

Now the first and fourth Figures, the second and fifth, and the third and sixth (if added together) will make Nines, begin at what Part of the Circle you please.

142	285	571
<u>857</u>	<u>714</u>	<u>428</u>
999	999	999

So the Decimal of $\frac{1}{73}$ is a Circle of eight Figures, viz. .01369863 &c.

Begin

Begin wherever you will, if the first four Figures be added to the four subsequent ones, the Total will be always a Series of Nines ; as for Example,

1369	6986
8630	3013
<u> </u>	<u> </u>
9999	9999

which peculiar Property must always be regarded when any of these Fractions are to be reduced to their lowest Terms ; for as the Denominators of perfect Decimals and simple Interminates, are an Unit with Cyphers subjoined, so the Denominators of compound Interminates are always as many Nines as there are Places in the decimal Fraction.

Any Decimal may be reduced to a vulgar Fraction, by subscribing its Denominator ; for Instance,

$$.3125 \quad .83\overline{3} \quad \text{and} \quad .65853 \text{ \&c.}$$

B

The

The first is a perfect Number, the second a simple Interminate, denoted by the Dash through the last Figure, and the third is a compound Interminate, expressed by the C , which signifies the same Figures would be repeated continually.

Subscribe their Denominators, and they become vulgar Fractions, thus

$$\frac{3125}{10000} \quad \frac{833}{1000} \quad \frac{65853}{99999}$$

These and the like Fractions are reduced to their lowest Terms by finding a common Measure in the ordinary Way of reducing vulgar Fractions; though generally perfect Numbers may be sooner reduced by a continued Division by 5.

$$\begin{array}{r} .3125) 1.0000 (3 \\ \underline{9375} \\ 0625) 3125 (5 \\ \underline{3125} \\ 0 \end{array}$$

The

The common Measure is .0625, by which divide the Numerator and Denominator, and they will produce a new Fraction in its lowest Terms.

$$\begin{array}{r} .0625) 3125 \text{ (5, new Numerator)} \\ \underline{3125} \\ 0 \end{array}$$

$$\begin{array}{r} .0625) 1.0000 \text{ (16, new Denominator)} \\ \times \\ \underline{625} \\ 3750 \\ \underline{3750} \\ 0 \end{array}$$

The second Reduction.

$$5) \frac{3125}{10000} \mid \frac{652}{2000} \mid \frac{325}{400} \mid \frac{25}{80} \mid \frac{5}{16} \text{ths.}$$

By each Way of reducing it, the perfect Decimal .3125 appears to be equal to

B 2

Reduce

Reduce $\frac{833}{1666}$ to its lowest Terms.

833) 1000 (1

$$\begin{array}{r} 833 \\ \underline{.166} \end{array} 833 \text{ (5, Numerator}$$

833

00

The common Measure is .166

166) 1000 (6, Denominator

1000

00

Answer, $\frac{5}{6}$ are the lowest Terms.

Reduce $\frac{65853}{99999}$ to its lowest Terms..

65853) 99999 (1

65853

34146) 65853 (1

34146

31707) 34146 (1

31707

The common Measure .02439) 31707 (13

2439

7317

7317

000

.02439)

$$\begin{array}{r}
 .02439) 65853 \text{ (27, Numerator)} \\
 \underline{4878} \\
 17073 \\
 \underline{17073} \\
 00
 \end{array}$$

$$\begin{array}{r}
 .02439) 99999 \text{ (41, Denominator)} \\
 \underline{9756} \\
 02439 \\
 \underline{02439} \\
 00
 \end{array}$$

The Answer is $\frac{27}{41}$ the lowest Terms.

Reduce $\frac{714285}{999999}$ to its lowest Terms.

$$\begin{array}{r}
 714285) 999999 \text{ (1)} \\
 \underline{714285} \\
 285714) 714285 \text{ (2)} \\
 \underline{571428}
 \end{array}$$

$$\begin{array}{r}
 \text{Common Measure } .142857) 285714 \text{ (2)} \\
 \underline{285714}
 \end{array}$$

$$142857) \frac{714285}{999999} \left(\frac{5}{7} \text{ the lowest Terms.} \right.$$

B 3

As

As interminate Fractions, both simple and compound, have certain Deficiencies peculiar to themselves, the Manner of adding and subtracting them must differ from that of perfect Numbers; but in all of them Care must be taken to set Tenths, Hundredths, and Thousand Parts &c. exactly under each other, and to separate from the Total as many decimal Places as are contained in the lowest Fraction added or subtracted.

If simple Interminates are to be added, all the Sums must be continued to an equal Number of Places; and in casting up the Units, you are to carry by Nine (instead of Ten) to supply the Want of the subsequent Figures, that would have been expressed, had they continued lower; for, as in the Reduction of these Numbers to Decimals there is always a Remainder of one in ten, so in casting up or multiplying the

the Units, if you carry only Nines (instead of Tens) it amounts to the same as taking in that Remainder.

And if perfect Decimals are mixed with Interminates, the latter must be continued, at least one Place, lower than the former, otherwise their Deficiency cannot so well be supplied.

Let the Decimals of 13s. 4d. 11s. 8d. and 5s. 5d. be added; also the Decimals of 8s. 4d. 6s. 10d. and 4s. 8d.

<i>l.</i>	<i>s.</i>	<i>d.</i>		<i>s.</i>	<i>d.</i>	
	13	: 4	.66666	8	: 4	.41666
	11	: 8	.58333	6	: 10	.34166
	5	: 5	.27083	4	: 8	.23333
<hr/>				<hr/>		
1	: 10	: 5	1.52083	19	: 10	.99166
<hr/>				<hr/>		

The Units in the first Example amount to 12, wherefore I set down 3 and carry one; in the second Example they amount to 15, which is 6 above 9, wherefore I

B 4

put

put 6 in the Unit's Place, by which Means the Deficiency is supplied.

If the Decimals of 13*s.* 4*d.* 6*s.* 8*d.* and 3*s.* 4*d.* are to be added, two Places in each Number will be sufficient.

These Decimals, expressed as low as thousandths, stand thus .66*℥* .33*℥* and .16*℥*

	<i>℥.</i>	<i>s.</i>	<i>d.</i>
.6 <i>℥</i>		13	4
.33		6	8
.16		3	4
<hr/>		<hr/>	<hr/>
1.1 <i>℥</i>	1	3	4
<hr/>	<hr/>	<hr/>	<hr/>

By this Example it appears, that simple Interminates may often be wrought with more Ease and fewer Figures than many perfect Numbers.

EXAMPLES

Of perfect Decimals and simple Interminates added together, *viz.* 14*s.* 2*d.*
17*s.*

DECIMAL ARITHMETIC. 29

17s. 9d. and 8s. 10d.; also 15s. 4d.
16s. 3d. and 17s. 7d.

l. s. d.

14 : 2 .70833̄

17 : 9 .8875

8 : 10 .4416̄

2 : 0 : 9 2.03750

l. s. d.

15 : 4 .76666̄

16 : 3 .81250

17 : 7 .87916̄

2 : 9 : 2 2.45833̄

Compound Interminates are likewise to be continued to an equal Number of Places, and the full Extent of their Circles, before they are cast up; and their Deficiency is supplied by trying what the subsequent Figures would have brought, had the Circles been repeated, which you may always know, if they consist of but few Places,

Places, as do the Decimals of $\frac{1}{10}$ $\frac{2}{10}$
and $\frac{1}{100}$

Let $\frac{1}{10}$ and $\frac{2}{10}$ and $\frac{1}{100}$ be added ;
also $\frac{2}{10}$ and $\frac{6}{10}$ and $\frac{4}{100}$

.846153 Ec.	.692307 Ec.
.615384	.461538
.384615	.307692
1.846153	1.461538

Total 1 and $\frac{11}{10}$

Total 1 and $\frac{6}{10}$

.571428 Ec.	.714285 Ec.
.428571	.857142
.285714	.142857
1.285714	1.714285

Total 1 and $\frac{2}{7}$

Total 1 and $\frac{2}{7}$

In these Examples the Circles extend as low as Millionths, and then repeat ; so that the Figures in the Place of Tenths would follow, if the Fractions were continued lower : But that is unnecessary, because if
you

you cast up the Tenths first in your Mind, you know how many you are to carry to the Millionth Parts, in order to supply their Deficiency; and this is a more certain Way than carrying by Nines, as in the Case of simple Interminates, though in general that Method will answer, as appears by these four Examples.

When circular Numbers extend to a very great Length before they repeat, it is much easier to perform the Work in vulgar Fractions, and then reduce your Product or Total to a decimal Fraction; there being many Numbers that will contain above fifty or threescore Figures, and some almost an hundred Figures in the Quotient, before they begin to repeat, as the Decimals of $\frac{1}{97}$ $\frac{1}{61}$ and $\frac{1}{39}$ to all which Numbers the Rule of *Approximation* is generally applied, which is this, viz.

Make

Make two Operations; first with the given Numbers which are less than Perfection; then with the same Numbers, increasing the lowest Figure by one, which will be more than the Truth, and so far as the two Products or Totals agree, the Decimal must be perfect. See p. 39.

But we proceed to other Examples.

Let $\frac{35}{41}$ and $\frac{13}{41}$ and $\frac{10}{41}$ be added;
also $\frac{90}{363}$ and $\frac{70}{363}$ and $\frac{50}{363}$

.60975 Ec.	.24657534 Ec.
.31707	.19178082
.24390	.13698630
<hr/>	<hr/>
1.17073	.57534246
Total 1 and $\frac{7}{41}$	Total $\frac{210}{363}$

Let $\frac{35}{73}$ and $\frac{26}{73}$ and $\frac{12}{73}$ be added.

.47945205 Ec.	.05479452 Ec.
.35616438	.38356164
.16438356	.56164383
<hr/>	<hr/>
.99999999	1.00000000

The

The Total of the first Sum is a Series of Nines, which is equal to Unity; wherefore in casting up the second Sum, I carried by Nine (instead of Ten) in the Units Place, which supplied the Deficiency; and if one had been added to the Units in the first Sum, it would have had the same Effect.

SUBTRACTION requires the like Disposition of setting Tenths under Tenths, Hundredths under Hundredths, &c.; and as many Places must be separated in the Difference, as there be in the lowest of the given Numbers.

Interminates (whether simple or compound) must be of an equal Length; and always continued lower than perfect Numbers when both are given.

In subtracting Infinites (or simple Interminates) from Infinites, or from perfect Numbers,

Numbers, you are to borrow but Nine (instead of Ten) in the Unit's Place ; and in compound Interminates you have Regard to what the subsequent Figures would produce, if the Fractions were continued lower.

E X A M P L E S.

$\begin{array}{r} 4.375 \\ 3.650 \\ \hline .725 \end{array}$	$\begin{array}{r} 10.4375 \\ 8.3333\cancel{3} \\ \hline 2.1041\cancel{6} \end{array}$	$\begin{array}{r} 1.33\cancel{3} \\ .66\cancel{6} \\ \hline .66\cancel{6} \end{array}$
--	---	--

$\begin{array}{r} .666\cancel{6} \\ .525 \\ \hline .141\cancel{6} \end{array}$	$\begin{array}{r} .428571 \text{ \textit{Etc.}} \\ .285714 \\ \hline .142857 \end{array}$	$\begin{array}{r} .846153 \text{ \textit{Etc.}} \\ .538461 \\ \hline .307692 \end{array}$
--	---	---

MULTIPLICATION of decimal Fractions is the same as of whole Numbers ; and so are all other Operations therein.

The general Rule is to separate as many decimal Places in the Product, as are contained

tained in both Factors; and if the Product doth not contain so many Figures, supply the Deficiency by placing Cyphers on the left Hand, and then fix the Pointer or Decimal Note.

EXAMPLES.

35.2	.125	25.375
<u>4.5</u>	<u>.25</u>	<u>4.75</u>
1760	625	126875
<u>1408</u>	<u>250</u>	<u>177625</u>
158.40	.03125	101500
		<u>120.53125</u>

If either of the Factors be an interminate Fraction, make it the Multiplicand, and if it be a simple Interminate, carry by Nines in the Multiplication of the Units, and when the Work is performed, make every Line of an equal Length before you cast them up, as was directed in the Rule of Addition.

EXAM-

EXAMPLES.

25.38	.166	.1588
<u>2.75</u>	<u>48.5</u>	<u>245.</u>
12666	838	7918
177383	500	63383
<u>506666</u>	<u>66666</u>	<u>316666</u>
<u>69.6666</u>	<u>7.2500</u>	<u>38.7918</u>

Let 4578 Dollars, at 3*s.* 4*d.* per Dollar, be reduced to Pounds Sterling; the Decimal of 3*s.* 4*d.* is .1666.

.1666	.1666	.16
<u>4578.</u>	<u>4578.</u>	<u>4578.</u>
13333	13333	133
116666	11666	1166
833383	8333	8383
<u>6666666</u>	<u>6666</u>	<u>66666</u>
763.0000	762.9293	763.00

Here the same Question is wrought three different Ways, whereby it appears, that considerable Loss would be sustained, if
the

the several Products were not continued to an equal Length, before they were cast up; for in the second Operation, where the Figures that should be on the right Hand of the diagonal Line, are not supplied, the Total proves very defective.

And the last Operation manifestly shews, that simple Interminates require fewer Figures to work with than more perfect Numbers frequently do.

When the Multiplicand is a compound Interminate, let it be continued to the full Extent of the Circle, that you may try what would be brought to the Figure in the Unit's Place; and let every Line of the Products be continued equally low, before you cast them up, taking Care that the Figures so supplied are such as properly belong to the respective Circles.

C

Let

Let $\frac{5}{7}$ and $\frac{90}{365}$ be multiplied by 423.

.714285 £c.	.24657534 £c.
423.	423.
<hr/>	<hr/>
2.142857	73972602
14285714	493150684
285714285	9863013698
<hr/>	<hr/>
302.142857	104.30136986
Product $382 \frac{1}{7}$	Product $104 \frac{110}{365}$

Four Men are concerned in a joint Undertaking, which originally belonged to thirteen Partners, whose Capital was divided into as many Shares, but now their Proportions are as follow, viz. *A* is possessed of $\frac{1}{13}$, *B* has $\frac{3}{13}$, *C* has $\frac{4}{13}$, and *D* $\frac{5}{13}$. They are to make a Dividend between them of 780*l.* Profits of the last three Months Trade; query each Man's Proportion thereof?

Take the Decimal of $\frac{1}{13}$ (to wit) .076923, £c. for a common Factor, which multiply

multiply by the Sum that is to be divided,
and the Product will be exactly one thir-
teenth Part of the Sum.

		Factor
A's Share	60 <i>l.</i>	.076923 &c.
B's ———	180 <i>l.</i>	780. the Sum.
C's ———	240 <i>l.</i>	—————
D's ———	300 <i>l.</i>	6153846
	—————	53846183
	780 <i>l.</i>	—————
	—————	60.000000

Examples of decimal Fractions that will
not circulate unless they be continued to
a great Number of Places, in multiplying
of which we usually make two Opera-
tions, as before has been observed under
the Head of Approximation.

Let $\frac{3}{87}$ be multiplied by 432.

.7462686 -	.7462687 +
<u>432.</u>	<u>432.</u>
14925372	14925374
22388058	22388061
<u>29850744</u>	<u>29850748</u>
322.3880352	322.3880784

The two Products agree in the fractional Parts as far as to ten thousandths, which is sufficient, in case no further Operation is to be made therewith.

Multiplying by 10, 100, 1000, or any other Decuple, is performed by removing the Pointer forward, as many Places as you have Cyphers in the Multiplier.

Thus, the Decimal of 8 s. 5 d. $\frac{1}{4}$, which is .4218750, if multiplied

by 10 would be	4.218750
by 100 <u> </u>	42.18750
by 1000 <u> </u>	421.8750
by 10000 <u> </u>	4218.750

All

All which may be performed in the Mind, without transcribing the Figures.

But in Division the Work is quite the Reverse, by removing the Pointer back towards the left Hand, just so many Places as there are Cyphers in the Divisor. For as carrying the Pointer forward, gives the several Decuples of any Number, so bringing it back, shews the respective Decimals of the same Number.

Division, in other Respects, is the same as in whole Numbers; in which Care must be taken in preparing the Dividend, and settling the Quotient.

The Dividend must contain as many decimal Places, as the Divisor and Quotient together; and the Quotient must have exactly so many as the Dividend hath more than the Divisor.

If it happens that the Quotient doth not contain so many Figures, the Defect

must be supplied by prefixing one or more Cyphers, so as to take Place in the Decimal; and if the Dividend be a whole Number, subjoin a sufficient Quantity of Cyphers, that you may have Places enough in the Quotient.

Lastly, if the Dividend contains exactly the same Number of decimal Places as are in the Divisor, the Quotient will be a whole Number.

In 216*l.* Sterling, how many Pezzos, at 54*d.* per Pezzo.

The Decimal of one Pezzo is .225

$$\begin{array}{r}
 .225) 216.000 \text{ (960 Pezzos)} \\
 \underline{2025} \\
 1350 \\
 \underline{1350} \\
 0000
 \end{array}$$

In

DECIMAL ARITHMETIC. 43

In 279*l.* how many Mill Rees, at 5*s.* 7*d.* $\frac{1}{2}$ per Mill Rez?

The Decimal of 5*s.* 7*d.* $\frac{1}{2}$ is .28125.
 .28125) 279.00000 (992. Mill Rees

$$\begin{array}{r}
 253125 \\
 \hline
 258750 \\
 253125 \quad 4) \quad 992 \\
 \hline
 56250 \quad 248. \text{ Moi D'ors} \\
 56250 \\
 \hline
 0000
 \end{array}$$

In 609*l.* 8*s.* 3*d.* how many Livres, at 45*d.* per Ecus, or Crown of 3 Livres, or 60 Sous Tournois?

One Livre is .0625
 .0625) 609.41250 (9750.6

$$\begin{array}{r}
 5625 \\
 \hline
 4691 \\
 4375 \\
 \hline
 3162 \\
 3125 \\
 \hline
 3750 \\
 3750 \\
 \hline
 00
 \end{array}$$

Answer 9750 Livres and 12 Sous.

C 4

If

If either or both of the Factors be Interminate, work by the following Rules.

When the *Dividend* is an interminate Number, and you have Occasion to continue it lower, it must be done with the proper Figures belonging to the same Fraction, whether simple or compound.

When the *Divisor* is an Interminate, the first Product thereof, when placed under the Dividend, must be continued to an equal Length therewith, and when subtracted, it will produce a new Dividend; and the same Method must be repeated as often as any Figure is continued in the Quotient.

If a perfect Number is to be divided by an interminate one, let the Dividend end in a Cypher, else the first Substraction may prove wrong.

In

In 133*l.* 1*s.* 4*d.* $\frac{1}{2}$, how many Dollars,
at 37*d.* $\frac{3}{4}$?

$$\begin{array}{r}
 .157291\phi) 133.0687500 \text{ (846)} \\
 \underline{125833333} \\
 72354166 \\
 \underline{629166\phi6} \\
 9437500 \\
 \underline{9437500} \\
 000000
 \end{array}$$

Answer 846. Dollars.

Let $\frac{10}{37}$ be divided by $\frac{1}{18}$ in decimal
Numbers.

$$\begin{array}{r}
 .0625) .270270270 \text{ (4.32432 \&c.)} \\
 \underline{25 \ 0} \\
 2027 \\
 \underline{1875} \\
 1520 \\
 \underline{1250} \\
 2720 \\
 \underline{2500} \\
 2027 \\
 \underline{1875} \\
 1520 \\
 \underline{1250} \\
 270
 \end{array}$$

The Quotient is $4 \frac{12}{37}$

Let

Let $\frac{1}{4}$ of $\frac{1}{13}$ be divided by $2\frac{1}{2}$ decimally,
that is .019230769 &c. by 2.5

2.5) .019230769 (.00769230

$$\begin{array}{r}
 175 \\
 \hline
 173 \\
 150 \\
 \hline
 230 \\
 225 \\
 \hline
 57 \\
 50 \\
 \hline
 76 \\
 75 \\
 \hline
 19
 \end{array}$$

The Quotient is $\frac{1}{138}$ Part, or $\frac{1}{18}$ of $\frac{1}{13}$

Let

DECIMAL ARITHMETIC. 47

Let 8 and $\frac{4}{7}$ be divided by $\frac{1}{3}$ and $\frac{2}{3}$

$$\begin{array}{r} .3\cancel{x}) 8.5714285 \quad (25.71428 \\ 6\cancel{\delta}666666 \end{array}$$

$$\begin{array}{r} 19047619 \\ 16\cancel{\delta}66666 \end{array}$$

$$\begin{array}{r} 2380952 \\ 23\cancel{x}3333 \end{array}$$

$$\begin{array}{r} 47619 \\ 3\cancel{x}333 \end{array}$$

$$\begin{array}{r} 14285 \\ 13\cancel{x}33 \end{array}$$

$$\begin{array}{r} 952 \\ 6\cancel{\delta}6 \end{array}$$

$$\begin{array}{r} 285 \\ 26\cancel{\delta} \end{array}$$

$$1904 \text{ Etc.}$$

$$\begin{array}{r} 8.57 \\ 3 \end{array}$$

$$25.71 = 25 \frac{1}{7}$$

$$.66) 8.5714285 \text{ (} 12.85714$$

$$\begin{array}{r}
 66666666 \\
 \hline
 19047619 \\
 13833333 \\
 \hline
 5714285 \\
 5383333 \\
 \hline
 380952 \\
 338333 \\
 \hline
 47619 \\
 46666 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 8.57 \\
 1\frac{1}{2} \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 8.57 \\
 4.28 \\
 \hline
 \end{array}$$

$$12.85 = 12\frac{6}{7}$$

$$\begin{array}{r}
 952 \\
 666 \\
 \hline
 285 \\
 266 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 2) 25.71428 \\
 \hline
 12.85714
 \end{array}
 \left. \vphantom{\begin{array}{r} 2) 25.71428 \\ \hline 12.85714 \end{array}} \right\} \text{Proof.}$$

$$1904 \text{ \&c.}$$

It is presumed the Examples before given under each Rule, are sufficient to explain the Manner of working interminate Fractions, unto any one who is tolerably acquainted with decimal Arithmetic ;

tic; and to the consideration of such persons only these sheets are submitted.

One peculiar Advantage of round Numbers is, that all Reduction from higher to lower Denominations, and back again from a lower to a superior Denomination, is entirely saved, every Sum being at once expressed both in its highest and lowest Denomination, the Pointer, or decimal Note, fixing its Value, and the Removal thereof increasing or diminishing the same, in a tenfold Proportion; which is the Reason of their being considered as whole Numbers in all Operations.

This Property of being multiplied, or divided, only by removing the Pointer forward or backward, and thereby obtaining the several Decuples, or Decimals, of any given Sum, or Quantity, makes these Numbers the fittest of any for constructing all Sorts of Tables. Nine Lines only, and
those

those containing but few Figures, being sufficient to form a Table of very great Extent; whereas Tables constructed in vulgar Numbers, besides being liable to various typographical Mistakes, require more than ten thousand times the Number of Figures to answer the same Purposes; of which an Example shall be given in one general Table of Interest for Days.

The Income for one Day of 1 *l.* per Annum, is .002739726 *£c.* which is the Quotient of 1 *l.* divided by 365.

A Table constructed from this Quotient, must necessarily shew, by Inspection, the daily Income of any annual Sum, and consequently will be applicable to Questions of Interest for Days.

A T A B L E
at 100 l. per Cent. per Annum.

Indices.	Tabular Sums.
1	.002739726
2	.005479452
3	.008219178
4	.010958904
5	.013698630
6	.016438356
7	.019178082
8	.021917808
9	.024657534

The Indices denote the yearly Revenue, and the tabular Sums give the Income thereof for one Day.

	Thousands.	l.	s.	d.
Thus 6l. per A. yields per D.	.016 or	0	0	3 $\frac{3}{4}$ 78
60 - - - - -	.164	0	3	3 $\frac{1}{4}$ 81
600 - - - - -	1.643	1	12	10 $\frac{1}{2}$ 08
6000 - - - - -	16.438	16	8	9 82

Increase

Increase the annual Sum by any Number of Days, and the Table will equally shew the Income for those Days.

If the Income of the last mentioned yearly Sums was required for ten Days on each Sum, the Answers would be as follows :

	<i>Thousandths.</i>
The 6 <i>l.</i> per Ann. would produce	.164
60 - - - - -	1.643
600 - - - - -	16.438
6000 - - - - -	164.383

Every Sum being increased ten times.

If a Widow's Jointure of 500*l.* per Ann. is in Arrear fourscore Days, what is due for that Time ?

500 per Ann.	Index	Tab. Number
80 Days	40000	109.589 &c.
40000		

The Answer is 109*l.* 11*s.* 9*d.* $\frac{1}{4}$ and $\frac{4}{8}$ of a Farthing.

To

To apply this Table to Interest for Days, requires only the finding one Year's Interest of the principal Sum, which is always an hundredth Part of the Product of the same Sum, multiplied by the Rate *per Cent.*

Thus the Interest for one Year, of 2150*l.* principal Money, at the Rate of 4*l. per Cent. per Ann.* is found to be 86*l.* and if you would know ten Days Interest of the same Principal, take the tabular Sums answering to 860. in the Indices, which is increasing the yearly Sum by the Time, as before directed.

2150. Principal } An hundredth Part of
 4. the Rate } the Product is 86*l.* one
 8600. Product } Year's Interest.

	Indices	Tabular Sums
86 <i>per Ann.</i>	800. —	2.19178
10 Days	60. —	.16438
860		<u>2.35616</u>

Answer, 2*l.* 7*s.* 1*d.* $\frac{1}{4}$ 92 the Interest for 10 Days.

D

Other

Other Examples.

685 at 5 per Cent. for 26 Days

<u>5</u>		
34.25	one Year's Interest	
<u>26</u>		
205.50	800. —	2.191780
6850	90. —	.246575
<u>890.50</u>	0.5 —	.001369
		<u>2.439726</u>

Answer, 2 *l.* 8 *s.* 9 *d.* $\frac{1}{2}$ 14 hundredth of a Farthing.

2500*l.* at $3\frac{1}{2}$ for 68 Days

<u>3 $\frac{1}{2}$</u>	Indices	Tabular Sums
7500	5000 —	13.69863
<u>1250</u>	900 —	2.46565
87.50	50 —	.13698
<u>68</u>		<u>16.30136</u>
70000		
<u>52500</u>		
5950.00		

12000*l.*

120504 at $4\frac{1}{4}$ for 80 Days

$4\frac{1}{4}$

$\begin{array}{r} 48000 \\ 3000 \\ \hline 510.00 \end{array}$	$\begin{array}{r} 40000 \\ 800 \\ \hline 40800. \end{array}$	$\begin{array}{r} 109.58904 \\ 2.19178 \\ \hline 111.78082 \end{array}$
---	--	---

510.00 *per Ann.*
80.

111.78082

40800.

Answer, 111*l.* 15*s.* 7*d.* $\frac{1}{4}$ 59

In the same Manner, Tables may be raised for almost every Purpose, only by expressing the Value of an Unit in a decimal Fraction, and multiplying the same through the nine Figures.

There are certain Officers in the Navy, whose Pay is 13*s.* 6*d.* *per Diem*; now if one Day's Wages be reduced to a Decimal, and a Table formed thereon, the Value of any Number of Days Pay may be known by Inspection, which may be of great Use to a Pay-Clerk in the Hurry of Business. The Decimal of one Day's Pay is .675.

D 2

The

The TABLE is as follows :

Days.	Wages.
1	0.675
2	1.350
3	2.025
4	2.700
5	3.375
6	4.050
7	4.725
8	5.400
9	6.075

What is due to a Captain
of a third Rate for 134
Days ?

$$\begin{array}{r}
 100 \text{ Days} — 67.5 \\
 30 \text{ ————— } 20.25 \\
 4 \text{ ————— } 2.7 \\
 \hline
 90.45
 \end{array}$$

The Answer is 90*l.* 9*s.*

The several Parts of Time reduced to decimal Numbers, will be found very serviceable in the Construction of astronomical Tables, &c. as they greatly facilitate and shorten the Calculations.

The Decimal of 1 Hour (or $\frac{1}{24}$ of 1 Day) is .0416; $\frac{1}{8}$ of $\frac{1}{16}$ of 1 Hour gives the Decimal of 1 Minute, *viz.* .0006944
and

and $\frac{1}{6}$ of $\frac{1}{10}$ of 1 Minute is the Decimal of 1 Second, .00001157407 &c.

24) 1.0000 ($\frac{1}{24}$ the Decimal of 1 Hour

$$\begin{array}{r} 96 \\ \hline 40 \\ 24 \\ \hline 160 \\ 144 \\ \hline 16 \end{array}$$

6) .004166 one Tenth of 1 Hour

.000694 the Decimal of 1 Minute

6) .0000694444 one Tenth of 1 Minute

.00001157407 Decimal of 1 Second

In like Manner the Decimals of 3^{ds}, 4^{ths}, 5^{ths}, &c. are produced, and may be formed into Tables by multiplying them through the nine Figures, as before directed.

The Excess of the mean tropical solar Year, above the Egyptian Year of 365 Days, amounts to 5 Hours and 49 Minutes.

The Decimal of 5 h.	0 min.	—	.208333
of	40	—	— .027777
of	9	—	— .006250
			<hr/> .24236x

And as every Equinox and Solstice falls 5 h. 49 min. later than in the preceeding Year, a Table formed from this Number .24236x may be applied to many useful Purposes.

For Instance, In 1753 the Sun entered Libra, in a Meridian that lies 156° West of Greenwich, on September the 22^d (or 265th Day from the Calends of January) precisely at Noon, and 10 h. 24 min. later at Greenwich.

Now if we would know the Time of the autumnal Equinox in the present Year
1763,

1763, we must add to the Time in 1753, as many times 5 h. 49 min. as Years have elapsed, rejecting the Days, and the Answer is given :

The Interval between 1753 and 1763 is ten Years, the Decimal of 5 h. 49 min. answering to one Year is .24236 \bar{x} ; therefore ten Years will be 2.4236 \bar{x} , of which the two Days are to be rejected, and only the Decimal .4236 \bar{x} retained, which is equal to 10 h. 10 min.

The Reduction .4236

24

16944

84722

H. 10|16 \bar{x}

60

M. 10|000

D 4

Sun

	D.	H.	M.
Sun in Libra 1753, Sept.	22	0	0
Add for 10 Year's Interval		10	10
	<hr/>		
	22	10	10
Add for Meridian of Greenwich		10	24
	<hr/>		
In 1763, Sept.	22	20	34

It would be endless to enumerate all the Advantages of these Numbers, whereby we can raise Factors for whatever Uses we may have Occasion.

For Instance, in Cases of Exchange;

Reduce an Unit of the foreign Money to a Decimal of a Pound Sterling, and it becomes a common Factor; which, if multiplied by any Quantity of the foreign Money, gives the Value of the whole in English.

And if any Sum of English Money be divided by the same Factor, the Quotient will be its Value in the foreign Money.

A

DÈCIMAL ARITHMETIC. 61

A Bill is drawn for 54 Mill Rees, at 67*d.* $\frac{1}{2}$ per Mill Ree.

The Decimal of 1 Mill

$$\begin{array}{r}
 \text{Ree is } - - - .28125 \\
 \underline{54} \\
 112500 \\
 140625 \\
 \hline
 15.18750 = 15 \text{ } l. \text{ } 3 \text{ } d.
 \end{array}$$

Let 236*l.* 5*s.* Sterling be reduced to Mill Rees, of 67*d.* $\frac{1}{2}$ per Mill Ree.

$$\begin{array}{r}
 .28125) 236.25000 \text{ (840 Mill Rees)} \\
 \underline{225000} \\
 112500 \\
 112500 \\
 \hline
 00000
 \end{array}
 \qquad
 \begin{array}{r}
 4) 840 \\
 \hline
 210 \text{ Moi d'Ors}
 \end{array}$$

Proof:

Proof: 1.125 one Moi d'Or
 $\begin{array}{r} 210 \\ \hline 11250 \\ 2250 \\ \hline 236.250 \end{array}$ $\begin{array}{r} l. \\ s. \\ d. \end{array}$
 $236.250 = 236 \quad 5 \quad 0$

Here the same Factor answers both Questions.

See other Examples in *Multiplication* and *Division*.

I am engaged in a public Undertaking, wherein my Share or Interest is a one and fortieth Part of the Profit and Loss upon the whole.

Now the Decimal of $\frac{1}{40}$ is .02439 &c. And if this Factor be multiplied by any given Sum, the Product will be a one and fortieth Part of that Sum, whereby I may surely know what I am to pay or receive. See the Case in page 38 and 39.

If

If I am to pay any particular Duty, as suppose the old Subsidy on Tobacco, which is 5*l.* per Cent. upon the Rate for every Pound of Tobacco, with a Discount of 25*l.* per Cent. for prompt Payment ;

The Decimal of the Duty or Subsidy is .0031250 ; multiply this Factor by the Number of Pounds of Tobacco, and the Product will be the Sum to be paid.

The Wages of an able Seaman at 22*s.* per Month, is per Diem .0392857142^{*} &c.

Let this Factor be multiplied by the Number of Days, and the Wages are seen by the Product.

The Clerks in Chancery charge 10*d.* per Sheet for Copies of Bills, Answers, and other Pleadings.

The Decimal of 10*d.* is .0416^{*}
Which Factor, if multiplied by any Number

64 *The* USEFULNESS of

ber of Sheets, produces the Sum to be paid to the Clerk.

To form a Chronological Table that will shew the Day, Hour, and Minute, of the Autumnal Equinox in any Year of the World.

Reduce the Quantity of a tropical Year to a decimal Number, which will be 365.24236111; multiply this Factor through the nine Figures, and the Table is formed.

1	365.242361
2	730.484722
3	1095.727083
4	1460.969444
5	1826.211805
6	2191.454166
7	2556.696527
8	2921.938888
9	3287.181250

Q.

Q. The Time of the Sun's entering **Libra**
A. M. 3000, the first Year after Bif-
sextile ?

Years Days
3000 ——— 1095727.083 = to 20 d. or 2 h.

$$\begin{array}{r} 7) 1095727 \\ \hline 156532 + 3 \circ \end{array}$$

	D.	H.	M.
Epoch for Libra	297	0	0
3000 Yrs. Interval		2	0

	297	2	0
Retrocession	22		

	275	2	0
	273		

Sunday, October	2	2	0
		10	24

October 2 12 24 at Greenw.

The

The same Table converted into vulgar
Numbers.

Years.	D.	H.	M.	Years.	D.	H.	M.
9000	3287181	6	0	90	32871	19	30
8000	2921938	21	20	80	29219	9	20
7000	2556696	12	40	70	25566	23	10
6000	2191454	4	0	60	21914	13	0
5000	1826211	19	20	50	18262	2	50
4000	1460969	10	40	40	14609	16	40
3000	1095727	2	0	30	10957	6	30
2000	730484	17	20	20	7304	20	20
1000	365242	8	40	10	3652	10	10
900	328718	3	0	9	3287	4	21
800	292193	21	20	8	2921	22	32
700	255669	15	40	7	2556	16	43
600	219145	10	0	6	2191	10	54
500	182621	4	20	5	1826	5	5
400	146096	22	40	4	1460	23	16
300	109572	17	0	3	1095	17	27
200	73048	11	20	2	730	11	38
100	36524	5	40	1	365	5	49

Q. The tropical Reduction of 1440 Years ?

1000	—	365242	8	40
400	—	146096	22	40
40	—	14609	16	40

Answer 525949 Days.

I might

I might tire the Reader by instancing one Tythe of the Cases wherein these Numbers excel our common Arithmetic; but hope I have produced enough to shew their Superiority; wherefore I shall leave the further Application of them to those whose Business may require it, and who have Leisure to pursue the agreeable Task.

I freely confess, that, for my own Part, I never had Occasion for greater Skill in Numbers, than would enable me to cast up a Tradesman's Bill; but having subscribed for Mr. BROWN's *Arithmetica Infinita*, on its first Publication in 1718, I was desirous to know on what Principle his Tables were formed, and the Pleasure attending my Inquiry, engaged me in the Study of this Species of Arithmetic, so far as to acquire that little Knowledge I
have

have therein; and I shall think my Trouble
amply recompenced, if what is now im-
parted may be of Use to Society.

F I N I S.



A P P E N D I X

T O T H E

ATTEMPT to illustrate the Usefulness
of DECIMAL ARITHMETIC.

EVERY Decimal is the Quotient of the Numerator of some vulgar Fraction, divided by its Denominator.

Some Quotients will terminate in Cyphers, and are always perfect Decimals; others will continually repeat the same Figure, and are adequate to Perfection; and others will continue a few Figures, and then repeat the same Figures again; but many will continue to a great Length, before they begin to repeat.

E

As

As for Example, $\frac{2}{8}$ will be .250

$\frac{1}{3}$ will be .333

and $\frac{1}{7}$ will be .142857142857 &c.

but $\frac{1}{33}$ will be .01886792452830188 &c.

Perfect Decimals are wrought as whole Numbers; simple Interminates, by carrying by Nines the first Figure you multiply; and circular Numbers, by trying what the second Part of the Circle would bring forward: but when the Decimal continues to a great Number of Figures, we work by Approximation (that is) we take the first seven or eight Figures, and multiply them by the given Number, then we multiply the same Figures, increasing the last Figure by one, by the same Number, and so far as the Products agree in the fractional Parts, they must be perfect.

Let .333 be multiplied by 5, .142857 by 4, and .01886792 by 234.

.333

APPENDIX.

71

$$\begin{array}{r} .333 \\ 5. \\ \hline 1.666 \end{array}$$

$$\begin{array}{r} .142857 \\ 4 \\ \hline .571428 \end{array}$$

$$\begin{array}{r} .01886792 \\ 234. \\ \hline 07547168 \\ 5660376 \\ 3773584 \\ \hline 4.41509328 \end{array}$$

$$\begin{array}{r} .01886793 \\ 234. \\ \hline 07547172 \\ 5660379 \\ 3773586 \\ \hline 4.41509562 \end{array}$$

In the last Examples, the Totals agree as far as to Ten Thousandths in the fractional Parts, which is sufficient, if no further Operation is required to be therewith performed.

Every Decimal Fraction may be reduced to Money, by taking only the thousandth Parts, for every Fifty wherein you compute

E 2

pute

pute One Shilling; and for any Thing less than Fifty, reckon as many real Farthings, bating one if they exceed 24, the Decimal of 6 Pence being .025

And hereby we may learn, how to express English Money in Decimals, (to wit) set down Fifty Thousandths for every Shilling, and for any Thing less than a Shilling, as many Thousandths as there are real Farthings, adding one if they amount to, or exceed 24.

If the Decimal should not be compleat in the Thousandth Parts, it must be perfected according to the Rules I have laid down in my foregoing Treatise on the Usefulness of Decimal Arithmetic, wherein I have given exact Directions how to multiply and divide them, and to perform many other Operations in Decimals, and also to construct Tables for various Purposes; of which Sort are the following

Ninety-

NINETY-ONE TABLES,

Shewing at Sight,

The Income of Annuities, Pensions,
Wages, and other Yearly Payments,
for any Number of Days under three
Calendar Months.

One Day.

1	. 0 0 2 7 3 9 7 2 6
2	. 0 0 5 4 7 9 4 5 2
3	. 0 0 8 2 1 9 1 7 8
4	. 0 1 0 9 5 8 9 0 4
5	. 0 1 3 6 9 8 6 3 0
6	. 0 1 6 4 3 8 3 5 6
7	. 0 1 9 1 7 8 0 8 2
8	. 0 2 1 9 1 7 8 0 8
9	. 0 2 4 6 5 7 5 3 4

E 3

Two

APPENDIX.

Two Days.

1	. 0 0 5 4 7 9 4 5 2
2	. 0 1 0 9 5 8 9 0 4
3	. 0 1 6 4 3 8 3 5 6
4	. 0 2 1 9 1 7 8 0 8
5	. 0 2 7 3 9 7 2 6 0
6	. 0 3 2 8 7 6 7 1 2
7	. 0 3 8 3 5 6 1 6 4
8	. 0 4 3 8 3 5 6 1 6
9	. 0 4 9 3 1 5 0 6 8

Three Days.

1	. 0 0 8 2 1 9 1 7 8
2	. 0 1 6 4 3 8 3 5 6
3	. 0 2 4 6 5 7 5 3 4
4	. 0 3 2 8 7 6 7 1 2
5	. 0 4 1 0 9 5 8 9 0
6	. 0 4 9 3 1 5 0 6 8
7	. 0 5 7 5 3 4 2 4 6
8	. 0 6 5 7 5 3 4 2 4
9	. 0 7 3 9 7 2 6 0 2

Four

Four Days.

1	.	0	1	0	9	5	8	9	0	4
2	.	0	2	1	9	1	7	8	0	8
4	.	0	3	2	8	7	6	7	1	2
4	.	0	4	3	8	3	5	6	1	6
5	.	0	5	4	7	9	4	5	2	0
6	.	0	6	5	7	5	3	4	2	4
7	.	0	7	6	7	1	2	3	2	8
8	.	0	8	7	6	7	1	2	3	2
9	.	0	9	8	6	3	0	1	3	6

Five Days.

1	.	0	1	3	6	9	8	6	3	0
2	.	0	2	7	3	9	7	2	6	0
3	.	0	4	1	0	9	5	8	9	0
4	.	0	5	4	7	9	4	5	2	0
5	.	0	6	8	4	9	3	1	5	0
6	.	0	8	2	1	9	1	7	8	0
7	.	0	9	5	8	9	0	4	1	0
8	.	1	0	9	5	8	9	0	4	1
9	.	1	2	3	2	8	7	6	7	1

E 4

Six

APPENDIX.

Six Days.

1	. 0 1 6 5 3 8 2 5 6
2	. 0 3 2 8 7 6 7 1 2
3	. 0 4 9 3 1 5 0 6 8
4	. 0 6 5 7 5 3 4 2 4
5	. 0 8 2 1 9 1 7 8 0
6	. 0 9 8 6 3 0 1 3 6
7	. 1 1 5 0 6 8 4 9 3
8	. 1 3 1 5 0 6 8 4 9
9	. 1 4 7 9 4 5 2 0 5

Seven Days.

1	. 0 1 9 1 7 8 0 8 2
2	. 0 3 8 3 5 6 1 6 4
3	. 0 5 7 5 3 4 2 4 6
4	. 0 7 6 7 1 2 3 2 8
5	. 0 9 5 8 9 0 4 1 0
6	. 1 1 5 0 6 8 4 9 3
7	. 1 3 4 2 4 6 5 7 5
8	. 1 5 3 4 2 4 6 5 7
9	. 1 7 2 6 0 2 7 3 9

Eight

APPENDIX.

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Eight Days.

1	. 0 2 1 9 1 7 8 0 8
2	. 0 4 3 8 3 5 6 1 6
3	. 0 6 5 7 5 3 4 2 4
4	. 0 8 7 6 7 1 2 3 2
5	. 1 0 9 5 8 9 0 4 1
6	. 1 3 1 5 0 6 8 4 9
7	. 1 5 3 4 2 4 6 5 7
8	. 1 7 5 3 4 2 4 6 5
9	. 1 9 7 2 6 0 2 7 3

Nine Days.

1	. 0 2 4 6 5 7 5 3 4
2	. 0 4 9 3 1 5 0 6 8
3	. 0 7 3 9 7 2 6 0 2
4	. 0 9 8 6 3 0 1 3 6
5	. 1 2 3 2 8 7 6 7 1
6	. 1 4 7 9 4 5 2 0 5
7	. 1 7 2 6 0 2 7 3 9
8	. 1 9 7 2 6 0 2 7 3
9	. 2 2 1 9 1 7 8 0 8

Ten

APPENDIX.

Ten Days.

1	. 0 2 7 3 9 7 2 6 0
2	. 0 5 4 7 9 4 5 2 0
3	. 0 8 2 1 9 1 7 8 0
4	. 1 0 9 5 8 9 0 4 1
5	. 1 3 6 9 8 6 3 0 1
6	. 1 6 4 3 8 3 5 6 1
7	. 1 9 1 7 8 0 8 2 1
8	. 2 1 9 1 7 8 0 8 2
9	. 2 4 6 5 7 5 3 4 2

Eleven Days.

1	. 0 3 0 1 3 6 9.8 6
2	. 0 6 0 2 7 3 9 7 2
3	. 0 9 0 4 1 0 9 5 8
4	. 1 2 0 5 4 7 9 4 5
5	. 1 5 0 6 8 4 9 3 1
6	. 1 8 0 8 2 1 9 1 7
7	. 2 1 0 9 5 8 9 0 4
8	. 2 4 1 0 9 5 8 9 0
9	. 2 7 1 2 3 2 8 7 6

Twelve

APPENDIX.

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Twelve Days.

1	. 0 3 2 8 7 6 7 1 2
2	. 0 6 5 7 5 3 4 2 4
3	. 0 9 8 6 3 0 1 3 6
4	. 1 3 1 5 0 6 8 4 9
5	. 1 6 4 3 8 3 5 6 1
6	. 1 9 7 2 6 0 2 7 3
7	. 2 3 0 1 3 6 9 8 6
8	. 2 6 3 0 1 3 6 9 8
9	. 2 9 5 8 9 0 4 1 2

Thirteen Days.

1	. 0 3 5 6 1 6 4 3 8
2	. 0 7 1 2 3 2 8 7 6
3	. 1 0 6 8 4 9 3 1 5
4	. 1 4 2 4 6 5 7 5 3
5	. 1 7 8 0 8 2 1 9 1
6	. 2 1 3 6 9 8 6 3 0
7	. 2 4 9 3 1 5 0 6 8
8	. 2 8 4 9 3 1 5 0 6
9	. 3 2 0 5 4 7 9 4 5

Fourteen

Fourteen Days.

1	. 0 3 8 3 5 6 1 6 4
2	. 0 7 6 7 1 2 3 2 8
3	. 1 1 5 0 6 8 4 9 3
4	. 1 5 3 4 2 4 6 5 7
5	. 1 9 1 7 8 0 8 2 1
6	. 2 3 0 1 3 6 9 8 6
7	. 2 6 8 4 9 3 1 5 0
8	. 3 0 6 8 4 9 3 1 5
9	. 3 4 5 2 0 5 4 7 9

Fifteen Days.

1	. 0 4 1 0 9 5 8 9 0
2	. 0 8 2 1 9 1 7 8 0
3	. 1 2 3 2 8 7 6 7 1
4	. 1 6 4 3 8 3 5 6 1
5	. 2 0 5 4 7 9 4 5 2
6	. 2 4 6 5 7 5 3 4 2
7	. 2 8 7 6 7 1 2 3 2
8	. 3 2 8 7 6 7 1 2 3
9	. 3 6 9 8 6 3 0 1 3

Sixtee

APPENDIX.

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Sixteen Days.

1	. 0 4 3 8 3 5 6 1 6
2	. 0 8 7 6 7 1 2 3 2
3	. 1 3 1 5 0 6 8 4 9
4	. 1 7 5 3 4 2 4 6 5
5	. 2 1 9 1 7 8 0 8 2
6	. 2 6 3 0 1 3 6 9 8
7	. 3 0 6 8 4 9 3 1 5
8	. 3 5 0 6 8 4 9 3 1
9	. 3 9 4 5 2 0 5 4 7

Seventeen Days.

1	. 0 4 6 5 7 5 3 4 2
2	. 0 9 3 1 5 0 6 8 4
3	. 1 3 9 7 2 6 0 2 7
4	. 1 8 6 3 0 1 3 6 9
5	. 2 3 2 8 7 6 7 1 2
6	. 2 7 9 4 5 2 0 5 4
7	. 3 2 6 0 2 7 3 9 7
8	. 3 7 2 6 0 2 7 3 9
9	. 4 1 9 1 7 8 0 8 2

Eighteen

APPENDIX.

Eighteen Days.

1	. 0 4 9 3 1 5 0 6 8
2	. 0 9 8 6 3 0 1 3 6
3	. 1 4 7 9 4 5 2 0 5
4	. 1 9 7 2 6 0 2 7 3
6	. 2 4 6 5 7 5 3 4 2
7	. 2 9 5 8 9 0 4 1 0
8	. 3 4 5 2 0 5 4 7 9
9	. 3 9 4 5 2 0 5 4 7
	. 4 4 3 8 3 5 6 1 6

Nineteen Days.

1	. 0 5 2 0 5 4 7 9 4
2	. 1 0 4 1 0 9 5 8 9
3	. 1 5 6 1 6 4 3 8 3
4	. 2 0 8 2 1 9 1 7 8
5	. 2 6 0 2 7 3 9 7 2
6	. 3 1 2 3 2 8 7 6 7
7	. 3 6 4 3 8 3 5 6 1
8	. 4 1 6 4 3 8 3 5 6
9	. 4 6 8 4 9 3 1 5 0

Twenty

Twenty Days.

1	.	0	5	4	7	9	4	5	2	0
2	.	1	0	9	5	8	9	0	4	1
3	.	1	6	4	3	8	3	5	6	1
4	.	2	1	9	1	7	8	0	8	2
5	.	2	7	3	9	7	2	6	0	2
6	.	3	2	8	7	6	7	1	2	3
7	.	3	8	3	5	6	1	6	4	3
8	.	4	3	8	3	5	6	1	6	4
9	.	4	9	3	1	5	0	6	8	4

Twenty-one Days.

1	.	0	5	7	5	3	4	2	4	6
2	.	1	1	5	0	6	8	4	9	3
3	.	1	7	2	6	0	2	7	3	9
4	.	2	3	0	1	3	6	9	8	6
5	.	2	8	7	6	7	1	2	3	2
6	.	3	4	5	2	0	5	4	7	9
7	.	4	0	2	7	3	9	7	2	6
8	.	4	6	0	2	7	3	9	7	2
9	.	5	1	7	8	0	8	2	1	9

Twenty-

Twenty-two Days.

1	. 0 6 0 2 7 3 9 7 2
2	. 1 2 0 5 4 7 9 4 5
3	. 1 8 0 8 2 1 9 1 7
4	. 2 4 1 0 9 5 8 9 0
5	. 3 0 1 3 6 9 8 6 3
6	. 3 6 1 6 4 3 8 3 5
7	. 4 2 1 9 1 7 8 0 8
8	. 4 8 2 1 9 1 7 8 0
9	. 5 4 2 4 6 5 7 5 3

Twenty-three Days.

1	. 0 6 3 0 1 3 6 9 8
2	. 1 2 6 0 2 7 3 9 7
3	. 1 8 9 0 4 1 0 9 5
4	. 2 5 2 0 5 4 7 9 4
5	. 3 1 5 0 6 8 4 9 3
6	. 3 7 8 0 8 2 1 9 1
7	. 4 4 1 0 9 5 8 9 0
8	. 5 0 4 1 0 9 5 8 9
9	. 5 6 7 1 2 3 2 8 7

Twenty-

APPENDIX.

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Twenty-four Days.

1	.	0	6	5	7	5	3	4	2	4
2	.	1	3	1	5	0	6	8	4	9
3	.	1	9	7	2	6	0	2	7	3
4	.	2	6	3	0	1	3	6	9	8
5	.	3	2	8	7	6	7	1	2	3
6	.	3	9	4	5	2	0	5	4	7
7	.	4	6	0	2	7	3	9	7	2
8	.	5	2	6	0	2	7	3	9	7

Twenty-five Days.

1	.	0	6	8	4	9	3	1	5	0
2	.	1	3	6	9	8	6	3	0	1
3	.	2	0	5	4	7	9	4	5	2
4	.	2	7	3	9	7	2	6	0	2
5	.	3	4	2	4	6	5	7	5	3
6	.	4	1	0	9	5	8	9	0	4
7	.	4	7	9	4	5	2	0	5	4
8	.	5	4	7	9	4	5	2	0	5
9	.	6	1	6	4	3	8	3	5	6

F

Twenty-

Twenty-six Days.

1	.	0	7	1	2	3	2	8	7	6
2	.	1	4	2	4	6	5	7	5	3
3	.	2	1	3	6	9	8	6	3	0
4	.	2	8	4	9	3	1	5	0	6
5	.	3	5	6	1	6	4	3	8	3
6	.	4	2	7	3	9	7	2	6	0
7	.	4	9	8	6	3	0	1	3	6
8	.	5	6	9	8	6	3	0	1	3
9	.	6	4	1	0	9	5	8	9	0

Twenty-seven Days.

1	.	0	7	3	9	7	2	6	0	2
2	.	1	4	7	9	4	5	2	0	5
3	.	2	2	1	9	1	7	8	0	8
4	.	2	9	5	8	9	0	4	1	0
5	.	3	6	9	8	6	3	0	1	3
6	.	4	4	3	8	3	5	6	1	6
7	.	5	1	7	8	0	8	2	1	9
8	.	5	9	1	7	8	0	8	2	1
9	.	6	6	5	7	5	3	4	2	4

Twenty-

APPENDIX.

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Twenty-eight Days.

1	.	0	7	6	7	1	2	3	2	8
2	.	1	5	3	4	2	4	6	5	7
3	.	2	3	0	1	3	6	9	8	6
4	.	3	0	6	8	4	9	3	1	5
5	.	3	8	3	5	6	1	6	4	3
6	.	4	6	0	2	7	3	9	7	2
7	.	5	3	6	9	8	6	3	0	1
8	.	6	1	3	6	9	8	6	3	0
9	.	6	9	0	4	1	0	9	5	8

Twenty-nine Days.

1	.	0	7	9	5	4	2	0	5	4
2	.	1	5	8	9	0	4	1	0	9
3	.	2	3	8	3	5	6	1	6	4
4	.	3	1	7	8	0	8	2	1	9
5	.	3	9	7	2	6	0	2	7	3
6	.	4	7	6	7	1	2	3	2	8
7	.	5	5	6	1	6	4	3	8	3
8	.	6	3	5	6	1	6	4	3	8
9	.	7	1	5	0	6	8	4	9	3

F 2

Thirty

APPENDIX.

Thirty Days.

1	. 0 8 2 1 9 1 7 8 0
2	. 1 6 4 3 8 3 5 6 1
3	. 2 4 6 5 7 5 3 4 2
4	. 3 2 8 7 6 7 1 2 3
5	. 4 1 0 9 5 8 9 0 4
6	. 4 9 3 1 5 0 6 8 4
7	. 5 7 5 3 4 2 4 6 5
8	. 6 5 7 5 3 4 2 4 6
9	. 7 3 9 7 2 6 0 2 7

Thirty-one Days.

1	. 0 8 4 9 3 1 5 0 6
2	. 1 6 9 8 6 3 0 1 3
3	. 2 5 4 7 9 4 5 2 0
4	. 3 3 9 7 2 6 0 2 7
5	. 4 2 4 6 5 7 5 3 4
6	. 5 0 9 5 8 9 0 4 1
7	. 5 9 4 5 2 0 5 4 7
8	. 6 7 9 4 5 2 0 5 4
9	. 7 6 4 3 8 3 5 6 1

Thirty-

APPENDIX.

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Thirty-two Days.

1	.	0	8	7	6	7	1	2	3	2
2	.	1	7	5	3	4	2	4	6	5
3	.	2	6	3	0	1	3	6	9	8
4	.	3	5	0	6	8	4	9	3	1
5	.	4	3	8	3	5	6	1	6	4
6	.	5	2	6	0	2	7	3	9	7
7	.	6	1	3	6	9	8	6	3	0
8	.	7	0	1	3	6	9	8	6	3
9	.	7	8	9	0	4	1	0	9	5

Thirty-three Days.

1	.	0	9	0	4	1	0	9	5	8
2	.	1	8	0	8	2	1	9	1	7
3	.	2	7	1	2	3	2	8	7	6
4	.	3	6	1	6	4	3	8	3	5
5	.	4	5	2	0	5	4	7	9	4
6	.	5	4	2	4	6	5	7	5	3
7	.	6	3	2	8	7	6	7	1	2
8	.	7	2	3	2	8	7	6	7	1
9	.	8	1	3	6	9	8	6	3	0

F 3

Thirty-

APPENDIX.

Thirty-four Days.

1	.	0	9	3	1	5	0	6	8	4
2	.	1	8	6	3	0	1	3	6	9
3	.	2	7	9	4	5	2	0	5	4
4	.	3	7	2	6	0	2	7	3	9
5	.	4	6	5	7	5	3	4	2	4
6	.	5	5	8	9	0	4	1	0	9
7	.	6	5	2	0	5	4	7	9	4
8	.	7	4	5	2	0	5	4	7	9
9	.	8	3	8	3	5	6	1	6	4

Thirty-five Days.

1	.	0	9	5	8	9	0	4	1	0
2	.	1	9	1	7	8	0	8	2	1
3	.	2	8	7	6	7	1	2	3	2
4	.	3	8	3	5	6	1	6	4	3
5	.	4	7	9	4	5	2	0	5	4
6	.	5	7	5	3	4	2	4	6	5
7	.	6	7	1	2	3	2	8	7	6
8	.	7	6	7	1	2	3	2	8	7
9	.	8	6	3	0	1	3	6	9	8

Thirty-

APPENDIX.

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Thirty-six Days.

1	. 0 9 8 6 3 0 1 3 6
2	. 1 9 7 2 6 0 2 7 3
3	. 2 9 5 8 9 0 4 1 0
4	. 3 9 4 5 2 0 5 4 7
5	. 4 9 3 1 5 0 6 8 4
6	. 5 9 1 7 8 0 8 2 1
7	. 6 9 0 4 1 0 9 5 8
8	. 7 8 9 0 4 1 0 9 5
9	. 8 8 7 6 7 1 2 3 2

Thirty-seven Days.

1	. 1 0 1 3 6 9 8 6 3
2	. 2 0 2 7 3 9 7 2 6
3	. 3 0 4 1 0 9 5 8 9
4	. 4 0 5 4 7 9 4 5 2
5	. 5 0 6 8 4 9 3 1 5
6	. 6 0 8 2 1 9 1 7 8
7	. 7 0 9 5 8 9 0 4 1
8	. 8 1 0 9 5 8 9 0 4
9	. 9 1 2 3 2 8 7 6 7

F 4

Thirty-

APPENDIX.

Thirty-eight Days.

1	.	1	0	4	1	0	9	5	8	9
2	.	2	0	8	2	1	9	1	7	8
3	.	3	1	2	3	2	8	7	6	7
4	.	4	1	6	4	3	8	3	5	6
5	.	5	2	0	5	4	7	9	4	5
6	.	6	2	4	6	5	7	5	3	4
7	.	7	2	8	7	6	7	1	2	3
8	.	8	3	2	8	7	6	7	1	2
9	.	9	3	6	9	8	6	3	0	1

Thirty-nine Days.

1	.	1	0	6	8	4	9	3	1	5
2	.	2	1	3	6	9	8	6	3	0
3	.	3	2	0	5	4	7	9	4	5
4	.	4	2	7	3	9	7	2	6	0
5	.	5	3	4	2	4	6	5	7	5
6	.	6	4	1	0	9	5	8	9	0
7	.	7	4	7	9	4	5	2	0	5
8	.	8	5	4	7	9	4	5	2	0
9	.	9	6	1	6	4	3	8	3	5

Forty

APPENDIX

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Forty Days.

1	.	1	0	9	5	8	9	0	4	1
2	.	2	1	9	1	7	8	0	8	2
3	.	3	2	8	7	6	7	1	2	3
4	.	4	3	8	3	5	6	1	6	4
5	.	5	4	7	9	4	5	2	0	5
6	.	6	5	7	5	3	4	2	4	6
7	.	7	6	7	1	2	3	2	8	7
8	.	8	7	6	7	1	2	3	2	8
9	.	9	8	6	3	0	1	3	6	9

Forty-one Days.

1	.	1	1	2	3	2	8	7	6	7
2	.	2	2	4	6	5	7	5	3	4
3	.	3	3	6	9	8	6	3	0	1
4	.	4	4	9	3	1	5	0	6	8
5	.	5	6	1	6	4	3	8	3	5
6	.	6	7	3	9	7	2	6	0	2
7	.	7	8	6	3	0	1	3	6	9
8	.	8	9	8	6	3	0	1	3	6
9	1.	0	1	0	9	5	8	9	0	4

Forty-

APPENDIX.

Forty-two Days.

1	.	1	1	5	0	6	8	4	9	3
2	.	2	3	0	1	3	6	9	8	6
3	.	3	4	5	2	0	5	4	7	9
4	.	4	6	0	2	7	3	9	7	2
5	.	5	7	5	3	4	2	4	6	5
6	.	6	9	0	4	1	0	9	5	8
7	.	8	0	5	4	7	9	4	5	2
8	.	9	2	0	5	4	7	9	4	5
9	1.	0	3	5	6	1	6	4	3	8

Forty-three Days.

1	.	1	1	7	8	0	8	2	1	9
2	.	2	3	5	6	1	6	4	3	8
3	.	3	5	3	4	2	4	6	5	7
4	.	4	7	1	2	3	2	8	7	6
5	.	5	8	9	0	4	1	0	9	5
6	.	7	0	6	8	4	9	3	1	5
7	.	8	2	4	6	5	7	5	3	4
8	.	9	4	2	4	6	5	7	5	3
9	1.	0	6	0	2	7	3	9	7	2

Forty-

APPENDIX.

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Forty-four Days.

1	.	1	2	0	5	4	7	9	4	5
2	.	2	4	1	0	9	5	8	9	0
3	.	3	6	1	6	4	3	8	3	5
4	.	4	8	2	1	9	1	7	8	0
5	.	6	0	2	7	3	9	7	2	6
6	.	7	2	3	2	8	7	6	7	1
7	.	8	4	3	8	3	5	6	1	6
8	I.	9	6	4	3	8	3	5	6	1
9	I.	0	8	4	9	3	1	5	0	6

Forty-five Days.

1	.	1	2	3	2	8	7	6	7	1
2	.	2	4	6	5	7	5	3	4	2
3	.	3	6	9	8	6	3	0	1	3
4	.	4	9	3	1	5	0	6	8	4
5	.	6	1	6	4	3	8	3	5	6
6	.	7	3	9	7	2	6	0	2	7
7	.	8	6	3	0	1	3	6	9	8
8	.	9	8	6	3	0	1	3	6	9
9	I.	1	0	9	5	8	9	0	4	1

Forty-

APPENDIX.

Forty-six Days.

1	.	1	2	6	0	2	7	3	9	7
2	.	2	5	2	0	5	4	7	9	4
3	.	3	7	8	0	8	2	1	9	1
4	.	5	0	4	1	0	9	5	8	9
5	.	6	3	0	1	3	6	9	8	6
6	.	7	5	6	1	6	4	3	8	3
7	.	8	8	2	1	9	1	7	8	0
8	1.	0	0	8	2	1	9	1	7	8
9	1.	1	3	4	2	4	6	5	7	5

Forty-seven Days.

1	.	1	2	8	7	6	7	1	2	3
2	.	2	5	7	5	3	4	2	4	6
3	.	3	8	6	3	0	1	3	6	9
4	.	5	1	5	0	6	8	4	9	3
5	.	6	4	3	8	3	5	6	1	6
6	.	7	7	2	6	0	2	7	3	9
7	.	9	0	1	3	6	9	8	6	3
8	1.	0	3	0	1	3	6	9	8	6
9	1.	1	5	8	9	0	4	1	0	9

Forty-

Forty-eight Days.

1	.	1	3	1	5	0	6	8	4	9
2	.	2	6	3	0	1	3	6	9	8
3	.	3	9	4	5	2	0	5	4	7
4	.	5	2	6	0	2	7	3	9	7
5	.	6	5	7	5	3	4	2	4	6
6	.	7	8	9	0	4	1	0	9	5
7	.	9	2	0	5	4	7	9	4	5
8	1.	0	5	2	0	5	4	7	9	4
9	1.	1	8	3	5	6	1	6	4	3

Forty-nine Days.

1	.	1	3	4	2	4	6	5	7	5
2	.	2	6	8	4	9	3	1	5	0
3	.	4	0	2	7	3	9	7	2	6
4	.	5	3	6	9	8	6	3	0	1
5	.	6	7	1	2	3	2	8	7	6
6	.	8	0	5	4	7	9	4	5	2
7	.	9	3	9	7	2	6	0	2	7
8	1.	0	7	3	9	7	2	6	0	2
9	1.	2	0	8	2	1	9	1	7	8

Fifty

APPENDIX.

Fifty Days.

1		. 1 3 6 9 8 6 3 0 1
2		. 2 7 3 9 7 2 6 0 2
3		. 4 1 0 9 5 8 9 0 4
4		. 5 4 7 9 4 5 2 0 5
5		. 6 8 4 9 3 1 5 0 6
6		. 8 2 1 9 1 7 8 0 8
7		. 9 5 8 9 0 4 1 0 9
8		1. 0 9 5 8 9 0 4 1 0
9		1. 2 3 2 8 7 6 7 1 2

Fifty-one Days.

1		. 1 3 9 7 2 6 0 2 7
2		. 2 7 9 4 5 2 0 5 4
3		. 4 1 9 1 7 8 0 8 2
4		. 5 5 8 9 0 4 1 0 9
5		. 6 9 8 6 3 0 1 3 6
6		. 8 3 8 3 5 6 1 6 4
7		. 9 7 8 0 8 2 1 9 1
8		1. 1 1 7 8 0 8 2 1 9
9		1. 2 5 7 5 3 4 2 4 6

Fifty-

APPENDIX.

99

Fifty-two Days.

1	.	1	4	2	4	6	5	7	5	3
2	.	2	8	4	9	3	1	5	0	6
3	.	4	2	7	3	9	7	2	6	0
4	.	5	6	9	8	6	3	0	1	3
5	.	7	1	2	3	2	8	7	6	7
6	.	8	5	4	7	9	4	5	2	0
7	.	9	9	7	2	6	0	2	7	3
8	I.	1	3	9	7	2	6	0	2	7
9	I.	2	8	2	1	9	1	7	8	0

Fifty-three Days.

1	.	1	4	5	2	0	5	4	7	9
2	.	2	9	0	4	1	0	9	5	8
3	.	4	3	5	6	1	6	4	3	8
4	.	5	8	0	8	2	1	9	1	7
5	.	7	2	6	0	2	7	3	9	7
6	.	8	7	1	2	3	2	8	7	6
7	I.	0	1	6	4	3	8	3	5	6
8	I.	1	6	1	6	4	3	8	3	5
9	I.	3	0	6	8	4	9	3	1	5

Fifty-

APPENDIX.

Fifty-four Days.

1	.	1	4	7	9	4	5	2	0	5
2	.	2	9	5	8	9	0	4	1	0
3	.	4	4	3	8	3	5	6	1	6
4	.	5	9	1	7	8	0	8	2	1
5	.	7	3	9	7	2	6	0	2	7
6	.	8	8	7	6	7	1	2	3	2
7	1.	0	3	5	6	1	6	4	3	8
8	1.	1	8	3	5	6	1	6	4	3
9	1.	3	3	1	5	0	6	8	4	9

Fifty-five Days.

1	.	1	5	0	6	8	4	9	3	1
2	.	3	0	1	3	6	9	8	6	3
4	.	4	5	2	0	5	4	7	9	4
4	.	6	0	2	7	3	9	7	2	6
5	.	7	5	3	4	2	4	6	5	7
6	.	9	0	4	1	0	9	5	8	9
7	1.	0	5	4	7	9	4	5	2	0
8	1.	2	0	5	4	7	9	4	5	2
9	1.	3	5	6	1	6	4	3	8	3

Fifty-

Fifty-six Days.

1	.	1	5	3	4	2	4	6	5	7
2	.	3	0	6	8	4	9	3	1	5
3	.	4	6	0	2	7	3	9	7	2
4	.	6	1	3	6	9	8	6	3	0
5	.	7	6	7	1	2	3	2	8	7
6	.	9	2	0	5	4	7	9	4	5
7	I.	0	7	3	9	7	2	6	0	2
8	I.	2	2	7	3	9	7	2	6	0
9	I.	3	8	0	8	2	1	9	1	7

Fifty-seven Days.

1	.	1	5	6	1	6	4	3	8	3
2	.	3	1	2	3	2	8	7	6	7
3	.	4	6	8	4	9	3	1	5	0
4	.	6	2	4	6	5	7	5	3	4
5	.	7	8	0	8	2	1	9	1	7
6	.	9	3	6	9	8	6	3	0	1
7	I.	0	9	3	1	5	0	6	8	4
8	I.	2	4	9	3	1	5	0	6	8
9	I.	4	0	5	4	7	9	4	5	2

G

Fifty-

APPENDIX.

Fifty-eight Days.

1	.	1	5	8	9	0	4	1	0	9
2	.	3	1	7	8	0	8	2	1	9
3	.	4	7	6	7	1	2	3	2	8
4	.	6	3	5	6	1	6	4	3	8
5	.	7	9	4	5	2	0	5	4	7
6	.	9	5	3	4	2	4	6	5	7
7	I.	1	1	2	3	2	8	7	6	7
8	I.	2	7	1	2	3	2	8	7	6
9	I.	4	3	0	1	3	6	9	8	6

Fifty-nine Days.

1	.	1	6	1	6	4	3	8	3	5
2	.	3	2	3	2	8	7	6	7	1
3	.	4	8	4	9	3	1	5	0	6
4	.	6	4	6	5	7	5	3	4	2
5	.	8	0	8	2	1	9	1	7	8
6	.	9	6	9	8	6	3	0	1	3
7	I.	1	3	1	5	0	6	8	4	9
8	I.	2	9	3	1	5	0	6	8	4
9	I.	4	5	4	7	9	4	5	2	0

Sixty

APPENDIX.

193

Sixty Days.

1	. 1 6 4 3 8 3 5 6 1
2	. 3 2 8 7 6 7 1 2 3
3	. 4 9 3 1 5 0 6 8 4
4	. 6 5 7 5 3 4 2 4 6
5	. 8 2 1 9 1 7 8 0 8
6	. 9 8 6 3 8 1 3 6 9
7	I. 1 5 0 6 8 4 9 3 1
8	I. 3 1 5 0 6 8 4 9 3
9	I. 4 7 9 4 5 2 0 5 4

Sixty-one Days.

1	. 1 6 7 1 2 3 2 8 7
2	. 3 3 4 2 4 6 5 7 5
3	. 5 0 1 3 6 9 8 6 3
4	. 6 6 8 4 9 3 1 5 0
5	. 8 3 5 6 1 6 4 3 8
6	I. 0 0 2 7 3 9 7 2 6
7	I. 1 6 9 8 6 3 0 1 3
8	I. 3 3 6 9 8 6 3 0 1
9	I. 5 0 4 1 0 9 5 8 9

G 2

Sixty-

APPENDIX

Sixty-two Days.

1	.	1	6	9	8	6	3	0	1	3
2	.	3	3	9	7	2	6	0	2	7
3	.	5	0	9	5	8	9	0	4	1
4	.	6	7	9	4	5	2	0	5	4
5	.	8	4	9	3	1	5	0	6	8
6	I.	0	1	9	1	7	8	0	8	2
7	I.	1	8	9	0	4	1	0	9	5
8	I.	3	5	8	9	0	4	1	0	9
9	I.	5	2	8	7	6	7	1	2	3

Sixty-three Days.

1	.	1	7	2	6	0	2	7	3	9
2	.	3	4	5	2	0	5	4	7	9
3	.	5	1	7	8	0	8	2	1	9
4	.	6	9	0	4	1	0	9	5	8
5	.	8	6	3	0	1	3	6	9	8
6	I.	0	3	5	6	1	6	4	3	8
7	I.	2	0	8	2	1	9	1	7	8
8	I.	3	8	0	8	2	1	9	1	7
9	I.	5	5	3	4	2	4	6	5	7

Sixty-

APPENDIX.

105

Sixty-four Days.

1	.	1	7	5	3	4	2	4	6	5
2	.	3	5	0	6	8	4	9	3	1
3	.	5	2	6	0	2	7	3	9	7
4	.	7	0	1	3	6	9	8	6	3
5	.	8	7	6	7	1	2	3	2	8
6	1.	0	5	2	0	5	4	7	9	4
7	1.	2	2	7	3	9	7	2	6	0
8	1.	4	0	2	7	3	9	7	2	6
9	1.	5	7	8	0	8	2	1	9	1

Sixty-five Days.

1	.	1	7	8	0	8	2	1	9	1
2	.	3	5	6	1	6	4	3	8	3
3	.	5	3	4	2	4	6	5	7	5
4	.	7	1	2	3	2	8	7	6	7
5	.	8	9	0	4	1	0	9	5	8
6	1.	0	6	8	4	9	3	1	5	0
7	1.	2	4	6	5	7	5	3	4	2
8	1.	4	2	4	6	5	7	5	3	4
9	1.	6	0	2	7	3	9	7	2	6

G 3

Sixty-

APPENDIX.

•Sixty-six Days.

1	.	1	8	0	8	2	1	9	1	7
2	.	3	6	1	6	4	3	8	3	5
3	.	5	4	2	4	6	5	7	5	3
4	.	7	2	3	2	8	7	6	7	1
5	.	9	0	4	1	0	9	5	8	9
6	1.	0	8	4	9	3	1	5	0	6
7	1.	2	6	5	7	5	3	4	2	4
8	1.	4	4	6	5	7	5	3	4	2
9	1.	6	2	7	3	9	7	2	6	0

Sixty-seven Days.

1	.	1	8	3	5	6	1	6	4	3
2	.	3	6	7	1	2	3	2	8	7
3	.	5	5	0	6	8	4	9	3	1
4	.	7	3	4	2	4	6	5	7	5
5	.	9	1	7	8	0	8	2	1	9
6	1.	1	0	1	3	6	9	8	6	3
7	1.	2	8	4	9	3	1	5	0	6
8	1.	4	6	8	4	9	3	1	5	0
9	1.	6	5	2	0	5	4	7	9	4

Sixty

APPENDIX.

107

Sixty-eight Days.

1	.	1	8	6	3	0	1	3	6	9
2	.	3	7	2	6	0	2	7	3	9
3	.	5	5	8	9	0	4	1	0	9
4	.	7	4	5	2	0	5	4	7	9
5	.	9	3	1	5	0	6	8	4	9
6	I.	1	1	7	8	0	8	2	1	9
7	I.	3	0	4	1	0	9	5	8	9
8	I.	4	9	0	4	1	0	9	5	8
9	I.	6	7	6	7	1	2	3	2	8

Sixty-nine Days.

1	.	1	8	9	0	4	1	0	9	5
2	.	3	7	8	0	8	2	1	9	1
3	.	5	6	7	1	2	3	2	8	7
4	.	7	5	6	1	6	4	3	8	3
5	.	9	4	5	2	0	5	4	7	9
6	I.	1	3	4	2	4	6	5	7	5
7	I.	3	2	3	2	8	7	6	7	1
8	I.	5	1	2	3	2	8	7	6	7
9	I.	7	0	1	3	6	9	8	6	3

G 4

Seventy

APPENDIX.

. Seventy Days.

1	.	1	9	1	7	8	0	8	2	1
2	.	3	8	3	5	6	1	6	4	3
3	.	5	7	5	3	4	2	4	6	5
4	.	7	6	7	1	2	3	2	8	7
5	.	9	5	8	9	0	4	1	0	9
6	I.	1	5	0	6	8	4	9	3	1
7	I.	3	4	2	4	6	5	7	5	3
8	I.	5	3	4	2	4	6	5	7	5
9	I.	7	2	6	0	2	7	3	9	7

Seventy-one Days.

1	.	1	9	4	5	2	0	5	4	7
2	.	3	8	9	0	4	1	0	9	5
3	.	5	8	3	5	6	1	6	4	3
4	.	7	7	8	0	8	2	1	9	1
5	.	9	7	2	6	0	2	7	3	9
6	I.	1	6	7	1	2	3	2	8	7
7	I.	3	6	1	6	4	3	8	3	5
8	I.	5	5	6	1	6	4	3	8	3
9	I.	7	5	0	6	8	4	9	3	1

Seventy-

APPENDIX.

109

Seventy-two Days.

1	.	1	9	7	2	6	0	2	7	3
2	.	3	9	4	5	2	0	5	4	7
3	.	5	9	1	7	8	0	8	2	1
4	.	7	8	9	0	4	1	0	9	5
5	.	9	8	6	3	0	1	3	6	9
6	1.	1	8	3	5	6	1	6	4	3
7	1.	3	8	0	1	8	2	1	9	1
8	1.	5	7	8	0	8	2	1	9	1
9	1.	7	7	5	3	4	2	4	6	5

Seventy-three Days.

1	.	2	0	0	0	0	0	0	0	0
2	.	4	0	0	0	0	0	0	0	0
3	.	6	0	0	0	0	0	0	0	0
4	.	8	0	0	0	0	0	0	0	0
5	1.	0	0	0	0	0	0	0	0	0
6	1.	2	0	0	0	0	0	0	0	0
7	1.	4	0	0	0	0	0	0	0	0
8	1.	6	0	0	0	0	0	0	0	0
9	1.	8	0	0	0	0	0	0	0	0

Seventy-

APPENDIX.

Seventy-four Days.

1	.	2	0	2	7	3	9	7	2	6
2	.	4	0	5	4	7	9	4	5	2
3	.	6	0	8	2	1	9	1	7	8
4	.	8	1	0	9	5	8	9	0	4
5	1.	0	1	3	6	9	8	6	3	0
6	1.	2	1	6	4	3	8	3	5	6
7	1.	4	1	9	1	7	8	0	8	2
8	1.	6	2	1	9	1	7	8	0	8
9	1.	8	2	4	6	5	7	5	3	4

Seventy-five Days.

1	.	2	0	5	4	7	9	4	5	2
2	.	4	1	0	9	5	8	9	0	4
3	.	6	1	6	4	3	8	3	5	6
4	.	8	2	1	9	1	7	8	0	8
5	1.	0	2	7	3	9	7	2	6	0
6	1.	2	3	2	8	7	6	7	1	2
7	1.	4	3	8	3	5	6	1	6	4
8	1.	6	4	3	8	3	5	6	1	6
9	1.	8	4	9	3	1	5	0	6	8

Seventy

APPENDIX.

111

Seventy-six Days.

1	.	2	0	8	2	1	9	1	7	8
2	.	4	1	6	4	3	8	3	5	6
3	.	6	2	4	6	5	7	5	3	4
4	.	8	3	2	8	7	6	7	1	2
5	I.	0	4	1	0	9	5	8	9	0
6	I.	2	4	9	3	1	5	0	6	8
7	I.	4	5	7	5	3	4	2	4	6
8	I.	6	6	5	7	5	3	4	2	4
9	I.	8	7	3	9	7	2	6	0	2

Seventy-seven Days.

1	.	2	1	0	9	5	8	9	0	4
2	.	4	2	1	9	1	7	8	0	8
3	.	6	3	2	8	7	6	7	1	2
4	.	8	4	3	8	3	5	6	1	6
5	I.	0	5	4	7	9	4	5	2	0
6	I.	2	6	5	7	5	3	4	2	4
7	I.	4	7	6	7	1	2	3	2	8
8	I.	6	8	7	6	7	1	2	3	2
9	I.	8	9	8	6	3	0	1	3	6

Seventy-

APPENDIX.

Seventy-eight Days.

1	.	2	1	3	6	9	8	6	3	0
2	.	4	2	7	3	9	7	2	6	0
3	.	6	4	1	0	9	5	8	9	0
4	.	8	5	4	7	9	4	5	2	0
5	1.	0	6	8	4	9	3	1	5	0
6	1.	2	8	2	1	9	1	7	8	0
7	1.	4	9	5	8	9	0	4	1	0
8	1.	7	0	9	5	8	9	0	4	1
9	1.	9	2	3	2	8	7	6	7	1

Seventy-nine Days.

1	.	2	1	6	4	3	8	3	5	6
2	.	4	3	2	8	7	6	7	1	2
3	.	6	4	9	3	1	5	0	6	8
4	.	8	6	5	7	5	3	4	2	4
5	1.	0	8	2	1	9	1	7	8	0
6	1.	2	9	8	6	3	0	1	3	6
7	1.	5	1	5	0	6	8	4	9	3
8	1.	7	3	1	5	0	6	8	4	9
9	1.	9	4	7	9	4	5	2	0	5

Eighty-

Eighty Days.

1	.	2	1	9	1	7	8	0	8	2
2	.	4	3	8	3	5	6	1	6	4
3	.	6	5	7	5	3	4	2	4	6
4	.	8	7	6	7	1	2	3	2	8
5	I.	0	9	5	8	9	0	4	1	0
6	I.	3	1	5	0	6	8	4	9	3
7	I.	5	3	4	2	4	6	5	7	5
8	I.	7	5	3	4	2	4	6	5	7
9	I.	9	7	2	6	0	2	7	3	9

Eighty-one Days.

1	.	2	2	1	9	1	7	8	0	8
2	.	4	4	3	8	3	5	6	1	6
3	.	6	6	5	7	5	3	4	2	4
4	.	8	8	7	6	7	1	2	3	2
5	I.	1	0	9	5	8	9	0	4	1
6	I.	3	3	1	5	0	6	8	4	9
7	I.	5	5	3	4	2	4	6	5	7
8	I.	7	7	5	3	4	2	4	6	5
9	I.	9	9	7	2	6	0	2	7	3

Eighty-

APPENDIX.

Eighty-two Days.

1	. 2 2 4 6 5 7 5 3 4
2	. 4 4 9 3 1 5 0 6 8
3	. 6 7 3 9 7 2 6 0 2
4	. 8 9 8 6 3 0 1 3 6
5	1. 1 2 3 2 8 7 6 7 1
6	1. 3 4 7 9 4 5 2 0 5
7	1. 5 7 2 6 0 2 7 3 9
8	1. 7 9 7 2 6 0 2 7 3
9	2. 0 2 1 9 1 7 8 0 8

Eighty-three Days.

1	. 2 2 7 3 9 7 2 6 0
2	. 4 5 4 7 9 4 5 2 0
3	. 6 8 2 1 9 1 7 8 0
4	. 9 0 9 5 8 9 0 4 1
5	1. 1 3 6 9 8 6 3 0 1
6	1. 3 6 4 3 8 3 5 6 1
7	1. 5 9 1 7 8 0 8 2 1
8	1. 8 1 9 1 7 8 0 8 2
9	2. 0 4 6 5 7 5 3 4 2

Eighty-

APPENDIX.

115

Eighty-four Days.

1	.	2	3	0	1	3	6	9	8	6
2	.	4	6	0	2	7	3	9	7	2
3	.	6	9	0	4	1	0	9	5	8
4	.	9	2	0	5	4	7	9	4	5
5	I.	1	5	0	6	8	4	9	3	1
6	I.	3	8	0	8	2	1	9	1	7
7	I.	6	1	0	9	5	8	9	0	4
8	I.	8	4	1	0	9	5	8	9	0
9	2.	0	7	1	2	3	2	8	7	6

Eighty-five Days.

1	.	2	3	2	8	7	6	7	1	2
2	.	4	6	5	7	5	3	4	2	4
3	.	6	9	8	6	3	0	1	3	6
4	.	9	3	1	5	0	6	8	4	9
5	I.	1	6	4	3	8	3	5	6	1
6	I.	3	9	7	2	6	0	2	7	3
7	I.	6	3	0	1	3	6	9	8	6
8	I.	8	6	3	0	1	3	6	9	8
9	2.	0	9	5	8	9	0	4	1	0

Eighty-

APPENDIX.

Eighty-six Days.

1	.	2	3	5	6	1	6	4	3	8
2	.	4	7	1	2	3	2	8	7	6
3	.	7	0	6	8	4	9	3	1	5
4	.	9	4	2	4	6	5	7	5	3
5	1.	1	7	8	0	8	2	1	9	1
6	1.	4	1	3	6	9	8	6	3	0
7	1.	6	4	9	3	1	5	0	6	8
8	1.	8	8	4	9	3	1	5	0	6
9	2.	1	2	0	5	4	7	9	4	5

Eighty-seven Days.

1	.	2	3	8	3	5	6	1	6	4
2	.	4	7	6	7	1	2	3	2	8
3	.	7	1	5	0	6	8	4	9	3
4	.	9	5	3	4	2	4	6	5	7
5	1.	1	9	1	7	8	0	8	2	1
6	1.	4	3	0	1	3	6	9	8	6
7	1.	6	6	8	4	9	3	1	5	0
8	1.	9	0	6	8	4	9	3	1	5
9	2.	1	4	5	2	0	5	4	7	9

Eighty-

Eighty-eight Days.

1	.	2	4	1	0	9	5	8	9	0
2	.	4	8	2	1	9	1	7	8	0
3	.	7	2	3	2	8	7	6	7	1
4	.	9	6	4	3	8	3	5	6	1
5	1.	2	0	5	4	7	9	4	5	2
6	1.	4	4	6	5	7	5	3	4	2
7	1.	6	8	7	6	7	1	2	3	2
8	1.	9	2	8	7	6	7	1	2	3
9	2.	1	6	9	8	6	3	0	1	3

Eighty-nine Days.

1	.	2	4	3	8	3	5	6	1	6
2	.	4	8	7	6	7	1	2	3	2
3	.	7	3	1	5	0	6	8	4	9
4	.	9	7	5	3	4	2	4	6	5
5	1.	2	1	9	1	7	8	0	8	2
6	1.	4	6	3	0	1	3	6	9	8
7	1.	7	0	6	8	4	9	3	1	5
8	1.	9	5	0	6	8	4	9	3	1
9	2.	1	9	4	5	2	0	5	4	7

H

Ninety

APPENDIX.

.Eighty-fix Days.

1	.	2	3	5	6	1	6	4	3	8
2	.	4	7	1	2	3	2	8	7	6
3	.	7	0	6	8	4	9	3	1	5
4	.	9	4	2	4	6	5	7	5	3
5	1.	1	7	8	0	8	2	1	9	1
6	1.	4	1	3	6	9	8	6	3	0
7	1.	6	4	9	3	1	5	0	6	8
8	1.	8	8	4	9	3	1	5	0	6
9	2.	1	2	0	5	4	7	9	4	5

Eighty-seven Days.

1	.	2	3	8	3	5	6	1	6	4
2	.	4	7	6	7	1	2	3	2	8
3	.	7	1	5	0	6	8	4	9	3
4	.	9	5	3	4	2	4	6	5	7
5	1.	1	9	1	7	8	0	8	2	1
6	1.	4	3	0	1	3	6	9	8	6
7	1.	6	6	8	4	9	3	1	5	0
8	1.	9	0	6	8	4	9	3	1	5
9	2.	1	4	5	2	0	5	4	7	9

Eighty-

APPENDIX.

117.

Eighty-eight Days.

1	.	2	4	1	0	9	5	8	9	0
2	.	4	8	2	1	9	1	7	8	0
3	.	7	2	3	2	8	7	6	7	1
4	.	9	6	4	3	8	3	5	6	1
5	1.	2	0	5	4	7	9	4	5	2
6	1.	4	4	6	5	7	5	3	4	2
7	1.	6	8	7	6	7	1	2	3	2
8	1.	9	2	8	7	6	7	1	2	3
9	2.	1	6	9	8	6	3	0	1	3

Eighty-nine Days.

1	.	2	4	3	8	3	5	6	1	6
2	.	4	8	7	6	7	1	2	3	2
3	.	7	3	1	5	0	6	8	4	9
4	.	9	7	5	3	4	2	4	6	5
5	1.	2	1	9	1	7	8	0	8	2
6	1.	4	6	3	0	1	3	6	9	8
7	1.	7	0	6	8	4	9	3	1	5
8	1.	9	5	0	6	8	4	9	3	1
9	2.	1	9	4	5	2	0	5	4	7

H

Ninety

APPENDIX.

Ninety Days.

1	.	2	4	6	5	7	5	3	4	2
2	.	4	9	3	1	5	0	6	8	4
4	.	7	3	9	7	2	6	0	2	7
4	.	9	8	6	3	0	1	3	6	9
5	1.	2	3	2	8	7	6	7	1	2
6	1.	4	7	9	4	5	2	0	5	4
7	1.	7	2	6	0	2	7	3	9	7
8	1.	9	7	2	6	0	2	7	3	9
9	2.	2	1	9	1	7	8	0	8	2

Ninety-one Days.

1	.	2	4	9	3	1	5	0	6	8
2	.	4	9	8	6	3	0	1	3	6
3	.	7	4	7	9	4	5	2	0	5
4	.	9	9	7	2	6	0	2	7	3
5	1.	2	4	6	5	7	5	3	4	2
6	1.	4	9	5	8	9	0	4	1	0
7	1.	7	4	5	2	0	5	4	7	9
8	1.	9	9	4	5	2	0	5	4	7
9	2.	2	4	3	8	3	5	6	1	6

APPLI-

APPLICATION of the TABLES.

A Widow, who had an Annuity of 650*l.* lived but sixty-nine Days of the Current Quarter of the Year.

Q. What is due to her Executrix?

By the Sixty-ninth Table,

600.	—	is	113.4246
50.	—		9.4520

122.8767

Answer, 122*l.* 17*s.* 6*d.* $\frac{5}{4}$

Q. What are Seven Days Income of a Pension of 800*l.* *per Ann.*

By the Seventh Table.

800	—	is	15.34246
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Answer, 15*l.* 6*s.* 10*d.* *per Week.*

or 2*l.* 3*s.* 10*d.* *per Diem.*

2	:	3	:	10
---	---	---	---	----

7

15	:	6	:	10
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My

My Butler who I agreed to pay 15*l.* *per Ann.* has lived with me only 40 Days,

Q. What is due to him?

By the Fortieth Table,

10 — is 1.09589

5 — .54794

1.64383

Answer, 1*l.* 12*s.* 10*d.* $\frac{1}{2}$

I have a Sum of Money at Interest, which brings me in 620*l.* 15*s.* *per Ann.*

Q. The Interest of the said Principal Sum for Fifty-four Days only?

By the Fifty-fourth Table,

600. — is 88.7671232

20. — 2.9589041

.7 — .1035616

.05 — .0073972

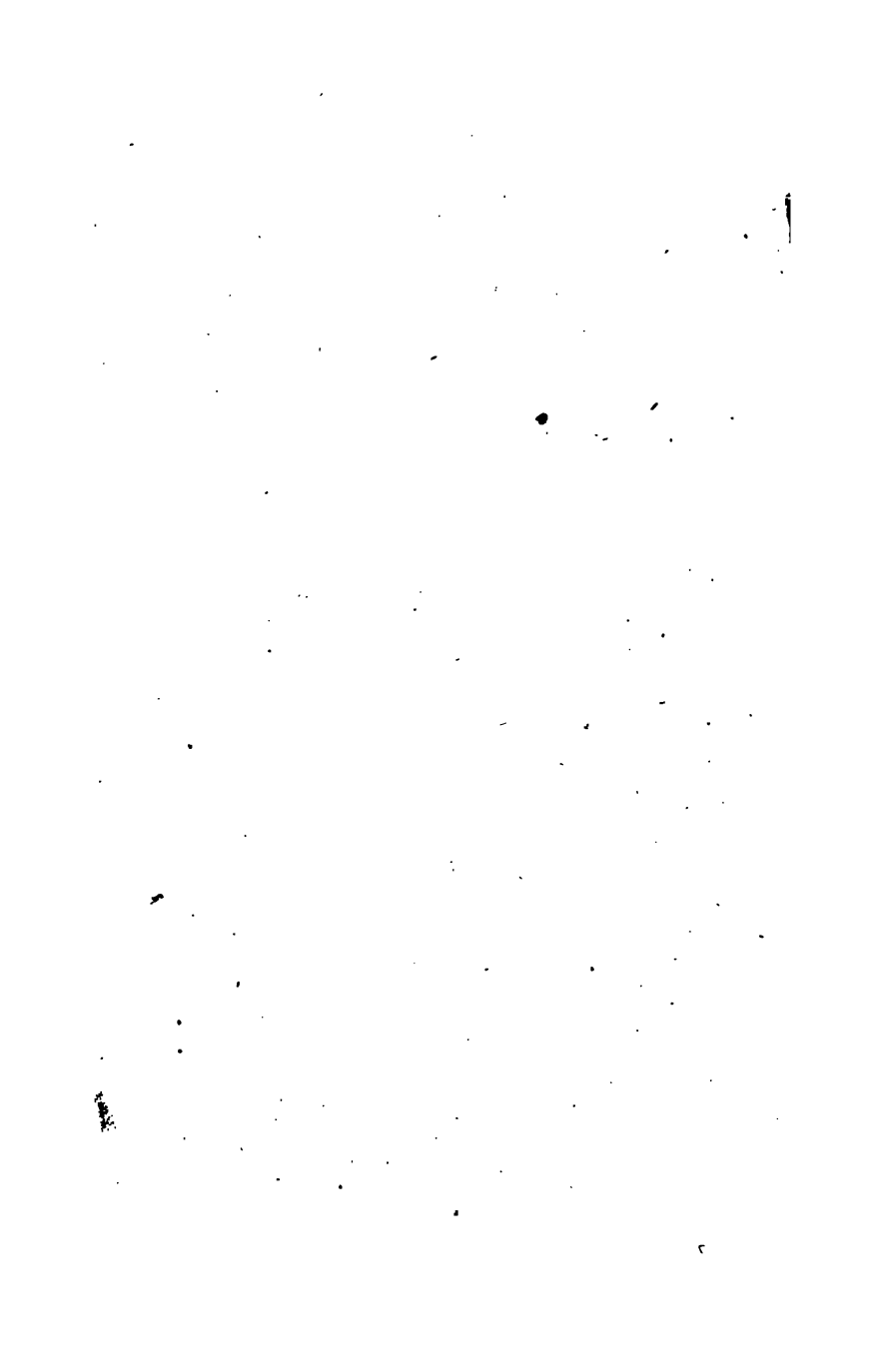
91.8369863

Answer, 91*l.* 16*s.* 8*d.* $\frac{3}{4}$

Note, For the .7 Tenths, the Decimal of the 7th Line is carried back one remove, and for the .05 the 5th Line is carried back two Places.

F I N I S.





712

